Address in Medicine:

MEDICINE AS A SCIENCE AND MEDICINE AS AN ART.

Delivered at the Annual Meeting of the British Medical Association held at Ipswich on August 1st, 1900,

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Mr. President and Gentlemen,—It has sometimes been disputed whether medicine should be regarded as a science or as an art, but there is no doubt that the original meaning of "medicine," and of the corresponding term in other languages, is the art of healing. Medicine is so defined by Aristotle, and the art of curing, to which we may add the art of preventing, disease has all the characters of an art. It depends upon experience and skill, it deals with individual cases, and the perfection it aims at is practical, not speculative—the knowledge how to do and not the knowledge how things happen. Nevertheless, as practical navigation is founded on astronomy, meteorology, and physics, and as the art of agriculture rests on botany, geology, and vegetable physiology, so the art of medicine depends on the science of pathology, the practice of physic on the principles of physic. On the one hand, then, we must never forget that we practise an art. We must never allow theories, or even what appear to be logical deductions, or explanations however ingenious, or statistics however apparently conclusive, or authority however venerable, to take the place of the one touchstone of practical medicine, experience. We must never treat the disease without considering the patient, for the art of healing is the art of healing individually. Nor need we wonder if vast knowledge, profound learning, and the best scientific training sometimes fail to make a successful practitioner, since, besides adequate knowledge to save us from gross blunders and a strenuous endeavour to do our best for each patient, however uninteresting the case or however irksome and unrewarded our toil—besides these first requisites for our art there is ample room for those personal qualities which ensure success in every department of life: for power of observation and insight, for the personal influence by which a strong character will secure obedience and inspire hope, for the judgment which divines what kind of remedies are suited to each patient, what kind and of what strength, and for the sympathy which puts one in the patient's place and not only meets, but anticipates, his wants.

If, however, medical science without art is inefficient, medical art without science is not only unprogressive but almost inevitably becomes quackery. As soon as we treat our patients by rule of thumb, by tradition, by dogmas, or by metaphysical axioms we do injury to ourselves as well as to them. The bone-setter who is ignorant of anatomy and the wise woman who cures by charms are not more irrational or less successful than was the physician of the seventeenth century who, in obedience to the doctrine of signatures, advised an infusion of roses for hæmorrhage, and saffron for jaundice, and lungwort for consumption, or the astrologer who prescribed salts of silver, iron, lead, or mercury in accordance with the horoscope of the patient and the planet under which he was born. Not less mischievous, and, in the true sense of the word, unscientific, were the systems of medicine known as the "iatromechanical" and the "iatrochemical," which in their turn had their vogue. The Brunonian system, explaining all diseases as due to laxity of fibre, was no better; for indiscriminate use of "corroborants," or, as they would now be called, "tonics," is as irrational as that of hydropathy, of alcoholic stimulation, or of electricity. There is no such thing as a tonic or strengthening medicine. The only source of strength is oxidisable food, and bitter medicines can only give strength by improving appetite and digestion. The last of the systems of medicine founded on a dogma is homœopathy, of which the theoretical absurdity is somewhat concealed by the more obvious nonsense of infinitesimal doses. It, like other systems which preceded it, is not a rival to rational medicine, it is not a mistaken answer to a legitimate question but an attempted solution of a problem which does not exist and an attempted answer to a riddle which has no solution.

Apart from these exploded systems of treatment our profession has often suffered from lack of the scientific, inquiring, sceptical spirit and has often been led too easily by authority, by tradition, and by fashion. The reckless abuse of venesection in the last century and the former half of this century led to almost complete disuse of a valuable means of treatment and the misuse of mercury in the treatment of syphilis led to the denial of its unquestionable efficacy. Have we not seen the value of stimulants in a contest with fever lead to their indiscriminate use in almost every ailment? Has not the immense value of careful and thorough nursing led to its absurd exaltation to an independent place—as if good nursing was anything more than an intelligent carrying out of the physician's directions? Has not the remarkable power of electrical stimuli led to a blind, unscientific, and mischievous employment of this remedy as if it had some mystic power apart from its demonstrable physiological effects? May we not say the same of hydropathy, of massage, and of hypnotism? It is significant that the irrational exaltation of any of these particular modes of treatment into a panacea, while it begins in want of scientific intelligence, invariably ends in imposture and deceit. Our only safeguard against the spirit of quackery and the deserved loss of public confidence in the profession which it brings with it is continued recurrence to the scientific basis on which the practice of medicine rests. Our art is most satisfactory and efficient when most closely resting on science. The surgeon is continually guided by anatomy and mechanics in dealing with injuries and deformities. The physician is often able to apply his knowledge of chemistry and natural history to the direct and satisfactory treatment of disease. In general, medical science justifies itself in the same way as astronomy or chemistry by its predictions coming true. In particular the detection of plumbism, the diagnosis and cure of scabies and ringworm, the treatment of poisons by chemical antidotes, and of specific diseases by attenuated inoculations, are all instances of strictly scientific medicine. Nor can I refrain from citing the most recent and one of the most remarkable advances of our science in the discovery of the origin of malaria. This heavy tax upon national as well as individual vigour and happiness has been known and treated from the dawn of medicine; but although by a happy accident its efficient treatment was discovered it is only lately that by the combined labours of scientific physicians, Frenchmen, Italians, and our own countrymen, the origin of the disease has been discovered, the mode of its transmission traced, and the diagnosis of its several forms established. We know that treatment of symptoms without a diagnosis is always unsatisfactory and frequently worse, but we know also that diagnosis must rest upon accurate knowledge of morbid anatomy and of the natural history of the disease. Scientific medicine based on observation and experiment is always practical as well, but empirical medicine, whether based upon fanciful speculation or working by blind rule of thumb, is the most impractical thing that can be.

Preventive Medicine and Etiology.

That important and constantly growing branch of medicine which deals with the prevention rather than the cure of disease depends no less upon science, for tracking the dependence of one event upon another is the essence of inductive science. All efficient measures for the preservation of health, whether by individuals or communities, rest upon exact knowledge of the natural course of diseases. In fact, disease may be defined as the reaction of the human organism under conditions which make for its destruction. We must never forget that no irritant will cause inflammation in a lifeless skin; that no bacteria can produce fever without a nervous system to play upon; that no meal, however Gargantuan, and no potations, however deep, can produce their wonted effect without a stomach to react. The infection of small-pox, of diphtheria, or of tubercle exerts a very different influence upon vaccinated or unvaccinated subjects, upon one who has received and one who has not received the prophylactic serum, upon an organism which is predisposed to, or which is refractory against, the invasion of the enemy. How closely natural science is related to preventive medicine

is shown by the history of Jenner who was a naturalist, and of Pasteur who was a chemist. How dependent we are upon science is well illustrated by the history of myxœdema. The cretinoid condition in adults which was discovered by the clinical acumen of Sir William Gull, unintentionally produced by the surgical skill of Professor Kocher, and reproduced in animals by Mr. Victor Horsley, is now cured by the eminently scientific method due to Dr. G. R. Murray of Newcastle and to Dr. Hector Mackenzie of St. Thomas's Hospital. Such examples of accurate tracing of causation by observation and experiment admonish us to give up the perfunctory explanations which so often do duty for investigation. If we ascribe every inflammation to cold or if we acquiesce in the popular ascription of disease to overwork, mental strain, and the nervous tension of modern life, we shall make no progress in true etiology. I see many patients suffering from idleness, but few or none suffering from hard work. "Nerve prostration" from "worry" and "brain-tension" generally proves to be a decent veil to the effects of gambling and drink. Modern life is easier, safer, and smoother that it was 100 years ago. Our young men and maidens are healthier, stronger, better grown, less emotional, less hysterical, and sounder in mind and body than their great grandparents. I venture to think that the duty of a physician is not to flatter the selfishness of neurotic patients, but to inspire fortitude and to prescribe regular and steady work as the best cure for a thousand nervous ailments.

As another point in scientific etiology, suffer a warning against the assumption that because many diseases are now proved to depend upon the presence of bacteria this must be true of all. Science does not anticipate but waits for proof. We have complete scientific evidence, according to the criteria so well formulated by Koch, of the absolute and constant cause of anthrax, of relapsing fever, of tubercle, and of several other diseases in both men and animals; but we must not forget the preliminary difficulty of identifying the specific bacillus as in the case of enteric fever and diphtheria, or the difficulty of finding one of the lower animals which is susceptible to the disease as again in the case of typhoid fever and of cholera, or the difficulty of the same anatomical and clinical conditions being produced by different organisms as in the case of pneumonia and ulcerative endocarditis. Moreover, while in some diseases which are undoubtedly infective and specific no constant pathogenic microbe has yet been determined—as in typhus fever, measles, small-pox, and syphilis—we have, on the other hand, in the case or leprosy and of lupus examples of disease unquestionably specific and bacterial in origin, but very unlike other infective maladies in their clinical course and natural history. At present it is surely undesirable to speak of "the undiscovered microbes of rheumatism." Science has to do with proved facts alone, and our language should never outrun our knowledge.

PROGNOSIS AND STATISTICS.

Another important branch of medicine—prognosis—depends as an art upon experience and insight. In making an individual prognosis shrewd observation is needed, and in this, of all branches of our art, it is true that—

> "Old experience doth attain
> To something like prophetic strain."

Yet here also rational prognosis rests on the science of statistics.

It is to Louis and the French School of the second quarter of this century that we owe the application of this important method for learning the natural history of disease—a method which not only supplies a foundation for prognosis but also a criterion of treatment. There are, however, many pitfalls in deducing conclusions from statistics. The morbidity or incidence of a particular disease upon the whole community is often confused with the mortality or the fatal cases of it compared with the population, and this last is confused again with the case mortality. The return of deaths from a certain disease in a town or kingdom has been applied to the population which existed eight or nine years before. The success of treatment of a disease occurring in barracks—that is to say, among picked subjects, all in early manhood, under strict discipline, and sent to hospital as soon as they are unwell—has been compared with that of other measures carried out in totally different circumstances. As examples of statistical misuse take these facts. The numerical returns of the lying-in charity of a London hospital led to the conclusion that more women were delivered of a second child than a first. A physician to inspire confidence in an anxious patient assured him that the mortality of the complaint from which he was suffering was only 1 per cent., and in answer to the further inquiry whether he had seen many cases, said, "Yes, I have looked at my note-books and find that I have seen 99, and they all recovered."

Apart from the corrections and limitations of statistical science we are sometimes in danger of forgetting that to be of any value statistics must be based upon cases which are both numerous and accurate. A small number of cases is useless. It led to the conclusion that myxœdema was peculiar to women and that insular sclerosis was rare in men. It was only after hundreds of cases had been observed that we learnt that infantile paralysis sometimes befalls adults and that osteo-arthritis may occur in children. This defect is remedied by time, but the defect of inaccuracy is without remedy. If diagnosis is perfunctory or careless or nomenclature is arbitrary and inconstant the more cases observed the less do they teach. It is disappointing, after the immense labour, time, and trouble devoted to the compilation of the official nomenclature of diseases of the Royal College of Physicians of London that although adopted in the navy and the army and by the Registrar-General it is constantly neglected, not only in conversation, but in systematic treatises. How can statistics be anything but misleading when made up of cases of one and the same disease under such different titles as "chronic rheumatism," "rheumatic gout," "rheumatoid arthritis," "arthritis deformans," and "osteo-arthritis"? Of what value are statistics when such different diseases as acute lobar pneumonia, broncho-pneumonia of children after measles, pulmonary tuberculosis, cirrhosis, and septic suppuration of the lung are all labeled "pneumonia"? One difficulty is put in the way of the practitioner in making an accurate return by the well-meant, but I think in practice unfortunate, provision for returning a primary and a secondary cause of death. Sometimes this corresponds to facts and gets over a difficulty; but if a patient dies from enteric fever there is nothing gained by adding congestion of the lungs as the secondary cause, still less do we learn from a return of "primary cause, a chill; secondary cause, debility." As a matter of fact, in looking through hundreds of death-certificates one arrives at the valuable conclusion that a frequent cause of death is "exhaustion" or "cardiac failure."

Another and opposite mistake is often made by attempts at too great precision in diagnosis. To say that a man died from apoplexy or from paraplegia is to state a fact within any competent practitioner's knowledge, but in the absence of a post-mortem inspection to say that he died from cerebral hæmorrhage or from myelitis is not a fact but a more or less doubtful inference. It is surely better to be satisfied with a statement that there were ascites and enlargement of the liver when the cause of enlargement is altogether uncertain than to be more exact and less true. I have again and again seen diseases the existence of which no experienced physician would assert without a necropsy returned as if they were common and easily recognised conditions—"pernicious anæmia," "syringomyelia," or "cancer of the lung." It would, I venture to submit, be a great improvement if the return of one cause of death only were demanded, if certainty and definite statements were aimed at rather than speculative minuteness or vague generalities, if a query were allowed to qualify deductions as distinct from observations, if the fact or the absence of a necropsy were always stated, and lastly, if the authorised nomenclature was always used.

EXPERIMENTS IN SCIENTIFIC MEDICINE.

There is one aspect of scientific medicine so important that it must not be omitted—the necessity of experiments for the progress of pathology and through it for the prevention and cure of disease. It requires no argument to convince anyone who is the least acquainted with the principles of inductive science that experiment is no less necessary than observation. In physics and in chemistry this is obvious and is universally acted on. The same method is indispensable for the progress of animal and vegetable physiology, and to such practical applications of science as engineering, agriculture, and medicine. Nor can experiments be restricted to rare and solemn occasions. They must be carried on in large numbers by many different experimenters and under every variety of condition. Any attempt to abolish, to check, or to limit this experimental

work is, in the degree that it is successful, fatal to progress. Happily it can never be successful, for the impulse to increase knowledge of the works of creation is too deeply implanted in men. Investigation must and will go on by the only path which it can follow. The method which was preached by Francis Bacon and followed out by his great contemporary William Harvey, which was continued by Lower, Hooke, and Mayow in the early days of the Royal Society, and by Aselli, Malpighi, and Haller, by Hunter, Hewson, and Hales, by Edward Jenner, by Sir Charles Bell, by Johannes Müller, by Claude Bernard, by Ludwig, and by the many eminent physiologists and pathologists in Germany, in France, and throughout the civilised world—this method of investigation is absolutely necessary for the progress of our art. As its objects and methods are better understood it will secure the enlightened patronage of all who desire the diffusion of human knowledge and the further spread of human happiness. Fortunately this very progress of science has brought with it the removal of the one grave drawback which every right-thinking man must have felt to the benefit we reap from these experiments upon living animals. Inflicting pain upon the humblest of God's creatures is repugnant to our feelings, though no one (unless maintaining a thesis) would contend that it is wrong to exact the most painful efforts, or even the death from exhaustion, of a horse in order to carry help to a human being. The discovery of ether, chloroform, and other anæsthetics and the improved methods that we owe to the genius of Lord Lister have not only relieved the surgeon of the most repulsive part of his duties but have relieved the experimenter also. Except in the investigation of the action of new remedies or in the inoculation of infective diseases—both of which inflict discomfort of a limited degree and duration rather than anything that can be described as pain—the experiments of the laboratory, whether physiological, pathological, or therapeutical, are conducted without inflicting pain. The opposition to them has not succeeded and it is sure to diminish. However mistaken our opponents we are glad to find that there is even exaggerated jealousy to avoid anything approaching to cruelty. Our more candid critics may be assured that this legitimate object is already amply provided for.

THERAPEUTICS AND SCIENCE.

Lastly, how far is the final end of our art—the cure of disease—directly dependent upon science? It rests, we know, upon that sure basis, but even in its practical carrying out we are bound to take with us a scientific spirit. The administration of digitalis for cardiac dropsy, of mercury for syphilis, and of thyroid extract for myxœdema is as truly scientific as prescribing a chemical antidote for poison or nitro-glycerine for angina pectoris, for it rests on a sure basis of observation and experience. But because in many cases we cannot as yet explain how remedies act we should not prescribe them without watching the effects of the experiment. The foolish cry against hospitals as "places where they experiment on patients" is meaningless just because it is true. Every prescription given, every operation performed on rich or on poor, is an experiment and ought to be watched with critical and scientific eyes. Here let me say that our practice is often ineffectual, not for want of an accurate diagnosis or of adequate means of treatment, but merely for want of the needful treatment being thoroughly carried out—a want which inevitably prevents success and therefore leads by a vicious circle to scepticism and want of thoroughness on the next occasion. A man who believes everything he is told of the action of remedies not only in the serious treatises of Garrod, or Wood, or Brunton, but in the partial assertions of advertising druggists, is sure to be unsuccessful, and, beginning with credulity, is apt to end in unbelief of such remedies as digitalis, and mercury, and opium. Such a man will prescribe and will never see that his prescription is carried out, and by the habit of giving multifarious mixtures of drugs in ineffectual doses he will allow what he has ordered to be taken three times a day for a fortnight to be really taken twice or only once a day for a week. He will prescribe exercise or lying down, abstinence or feeding, and never see that his directions are carried out. Who shall blame the patient if he ceases to believe in remedies to which the physician obviously attaches no importance? If we would sometimes prescribe no drug at all, but insist on abstinence from certain articles of food or drink or on more frequent or less frequent meals, on regular exercise or absolute rest, should we not secure more obedience from our patients when we prescribe really necessary drugs—just as a clergyman who desires to get a liberal collection would do wisely to begin by insisting on the sin of giving to charities which one believes to do more harm than good? How can we expect success in treating an obscure nervous affection if we apply galvanism to the spine without making sure of any physiological effect, nay, sometimes without making sure that a current is passing through the electrodes? or if we send a patient to drink the waters of such and such a fashionable watering place without remembering that there are two or perhaps three springs, one of them inert and the other perhaps injurious? What success can be anticipated if we order ointment for a weeping eczematous patch where it floats on the secretion and never reaches the inflamed tissue? or if we prescribe a lotion to be applied twice a day to skin well protected by its sebaceous secretion? We all know this half-hearted ineffectual mode of action in every-day life—we all know the man who wipes his shoes as a ceremony but never looks to see if he has got rid of the mud, the groom who feeds his horse but never sees whether the oats are eaten, and the nurse who washes the baby and still leaves wet places. Now much of this weak and therefore useless treatment comes of the indolence to which we are all prone and against which we must struggle as a temptation, but much of it, I am sure, is the offspring of incredulity which again springs from half-belief in quackery and imposture. Again, our ineffectual treatment often depends upon want of thorough diagnosis. Until we make up our minds whether a certain eruption is psoriasis or a scaly syphilide we shall never deal with it effectually. If we only suspect syphilis we shall give our remedies in too small doses and relinquish them if we do not see immediate benefit; whereas, if our diagnosis is real and thorough we shall use our remedies with confidence, increasing the doses, varying the form, but always persevering until we obtain the result we aim at.

Another source of failure in therapeutics is the legion of new remedies of which the biographies and eulogiums fill our waste-paper baskets and light our fires. It is astonishing to find apparently rational men forsaking the remedies which have been proved effectual by the experience of long past times and of every civilised nation to take up with drugs the very composition of which is often unknown, the use of which they have never learned, and of which the value rests upon the interested or credulous assertions of those who try to sell them. It takes a man long years of practice to learn how to prescribe opium. Why throw away this priceless knowledge to dabble in quack remedies the very praises of which inspire distrust? New remedies are, no doubt, discovered from time to time; in this generation we have had several, and all probable claimants should be tested in pharmacological laboratories and in hospital wards. But I am speaking of drugs which have never passed either of these tests. Surely in this age of advertisements which disfigure and defile the beauties of land and sea, of town and country, of literature and art, the most credulous must be convinced that costly and pertinacious advertisement is evidence of the lack rather than the possession of genuine worth. No, so far from our profession being carried away by this noxious habit let us hope that we may not only stamp it out from among ourselves but spread our own standard of conduct to other pursuits, until some day an honest tradesman shall be ashamed to push his sales by degrading self-laudation and the wealthy manufacturer shall shrink from offending the eyes and deafening the ears of his fellow-creatures by scribbling his name on blank walls and screaming it in every street.

In another popular branch of treatment it seems very desirable that the scientific spirit should be somewhat more freely admitted—I refer to treatment by baths and waters. That both are valuable modes of treatment no one will deny, but will anyone be so bold as to assert that it makes any difference whether our patients take a bath of water heated as it comes from the soil or heated to the same degree in a kettle? Who would pretend that so many grains of laxative or alkaline salts will act differently when occurring in natural solution and when dissolved in the same proportion in the druggist's shop? That benefit is obtained by change of air and scene, by early hours, regulated rest and exercise, and copious draughts of water is beyond dispute, but it is surely a pity when instead of rational explanation of our treatment our patients are deceived by unscientific and more or less untruthful statements.

Is it not a pity for so many of us to prescribe the made-up pills and mixtures offered us by wholesale manufacturers

instead of our own combinations? It leads our patients to ascribe their recovery, not to our skill, but to this or that "cure," and would it not be an excellent task for this great Association to set some of our skilled analytical chemists to strip the veil from mysterious remedies and tell us the exact composition of the many patent medicines some of which are inert and some injurious?

SCIENTIFIC MEDICINE AND ITS WAGES.

Finally, we may ask whether scientific medicine obtains the recognition that is its due at the hands of the public. I believe that on the whole it does, or if in any degree it fails that the failure is due to ourselves. We cannot expect that any but the most educated and enlightened should look at our science or our art from a rational point of view. The popular notion of a medical man among out-patients is a man who has got some wonderful stuff in a bottle which will make them well. The more educated patients suppose that, knowing what is the matter with them, or as we say, having made their diagnosis for themselves, their first business is to choose the practitioner who has devoted his exclusive attention to the malady of which they suppose they are the subjects, or if they chance to suffer from what they call a "complication" of diseases they will consult a "heart specialist" to cure palpitation, a "throat doctor" to cure hoarseness, and a rising young surgeon at "a special hospital for diseases of the knees" to cure weakness in that joint; and if they should find no relief after these consultations—

"Flectere si nequeo superos, Acheronta movebo"

—they denounce legitimate medicine as useless, and go to the lowest impostor, and will afterwards tell their friends that after being "given up by the faculty" they found instant and miraculous relief from a single box of wind pills, a galvanic belt, or a pad of oriental herbs worn on the pit of the stomach. The fact is that we cannot expect that our patients should understand the scientific basis of medicine, the meaning of etiology, or the possible degree of efficiency of treatment. What they frequently ask of us is to allow them to continue the very course of life to which we have laboriously traced their symptoms and to give them some medicine which as if by a charm will break the inevitable sequence of cause and effect. They are slow to understand that this world gives nothing for nothing, and that we can only subdue Nature by obeying her laws.

There is, indeed, only one way in which we can obtain what we call our just recognition. Our services, however great, are services to the individual not to the community. It is therefore absurd for us to expect the honorific or the more solid rewards justly assigned to statesmen, to generals, or to judges; but from individuals we may expect—and I venture to say that as a rule we receive—the trust, the honour, and the gratitude which we have earned. Few of our patients will ever understand our principles or our methods, the reason for our successes or the explanation of our failures; what they do understand is personal character, honesty and sense, kindness and sympathy, and liberality and benevolence to rich and poor. These are the qualities which have always gained and still gain the respect of our fellow-men; and I venture to say that there is not a town in the three kingdoms where such respect is not widely and deservedly enjoyed by our profession. Go to any cathedral or almost to any parish church in England and you will see tablets bearing witness to that respect. If such men do not receive all the money they deserve they have money's worth. They spend their lives in constant exercise of the powers of the mind guided by the best feelings of the heart—a sure path to happiness. They find constant interest in their daily work, and when their work is over and the medical man becomes the patient—as we all shall one day—they can look back on a life spent in the service of God and man with gratitude to both.

ACCOMMODATION FOR INFECTIOUS DISEASES AT BRISTOL.—The Health Committee of Bristol propose to submit to the Town Council a scheme for increasing the accommodation for infectious diseases. At present 147 beds are available, which is an average of one bed for 2300 of the population. The Health Committee suggest the extension of Ham Green Fever Hospital by the addition of the buildings originally intended and in the meantime temporarily to re-open Clift House, Bedminster, as a hospital in case the present hospital should not afford the necessary accommodation.

Address in Surgery:

THE SURGEON IN THE NINETEENTH CENTURY.

Delivered at the Annual Meeting of the British Medical Association held at Ipswich on August 2nd, 1900,

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MR. PRESIDENT, LADIES, AND GENTLEMEN,—The honour of being selected to address an Association which represents not only in numbers but also in dignity and repute the medical profession of this country is an honour of such a kind that I feel it can only be belittled by any expressions of gratitude I am able to command. I will do no more, therefore, than sincerely thank you for bestowing upon me a great distinction, and at the same time remind myself of the words of Goethe that "it is easier to bind a wreath than to find a head worthy to wear it." I am fortunate also in the circumstance that the occasion for the giving of this address should coincide with the concluding year of the nineteenth century. This century has been without a parallel in the history of human culture, and so far as the art of surgery is concerned has embodied an advance in principle and in practice which has been no other than revolutionary. I do not propose to attempt a review of the progress of surgery during the last 100 years. That work has been already done by abler hands. I would venture rather to deal with the progress of the surgeon himself during this period and with the advancement of the individual as an exponent of a grave profession.

There is little difficulty in fashioning a picture of England as it was 100 years ago. A sympathetic literature has left us with ample records of the men and women of the time and of the scenes they moved among. These records are rich with the littleness of personal affairs and are made living by the very gossip and petty commentaries of those who constituted society when the century was young. The life in England then was largely life spent in the country, in sleepy villages, and in sober self-esteeming county towns. The conditions were yet immature which led men to herd together in ever-extending cities and to swarm around oases of blackened chimneys and restless furnaces. Travelling was a luxury limited to the few. The many were content to live and die within sight of fields and spires which had been familiar from babyhood. They were apparently content to keep to their own stations in life, to take their notions of dignity from the squire and their conceptions of religion from the vicar, and to be satisfied with such excitement as was afforded by harvests and market days, by the movements of the locally great, and by the achievements and misdoings of their neighbours. In many a town it was no little event when the coach from London lumbered through the cobbled streets, or when a gang of pressed men marched by on their way to the sea, or when some soldier home from the wars made the little alehouse lurid with tales of arms and tragic lands. These simple folk were comparatively free from the fever of social ambition, from the almost savage conflict of modern commerce, and from the bewildering hurry of events which compass the peace of later times.

London was then not one-fourth of its present size; the great city ended towards the west at Sloane-street and beyond were quiet fields and meadows intersected by foot-paths, certain of which led to the hamlet of Kensington and the little riverside village of Chelsea. The lover of solitude would have found seclusion in the wide open country through which ran the Edgware-road. Paddington was still in the fields. Game could be shot about Westbourne Green and around the isolated farmhouse which marked the present settlement of St. John's Wood. Few would have cared to venture after dark across the bare fields of Battersea or to traverse the expanse of open land which stretched to the north of Tottenham Court. No railway terminus flaunted its hideous structure in the city's midst, and neither omnibus nor cab nor tram-car invaded the narrow streets. There was no telegraph and no telephone

The postal system was without form and void. The gayest streets were lit by oil lamps and the gloom by night was only equalled by the dirt by day. It was not until 1829 that the omnipotent policeman appeared upon the scene, and his early experience of the city's traffic was concerned with sedan chairs and cabriolets, with gaudy coaches and creeping wains, with linkboys and running footmen. It was not until 1821 that the English Channel was crossed by steamboats and that the hoys and coasting sloops, the dignified frigates and the stately East Indiamen began to vanish from the sea. Education among the mass of the people was a matter of little account and was to a great extent actually non-existing. The average man of the middle-class was quite content with a degree of learning which would do little more than satisfy the demands of a modern School Board.

As to the surgeon in those days, he was but a sorry element in social life. In the great towns and cities there were esteemed practitioners of surgery who were eminent by reason of their scientific work and their successful practice, but their numbers were few. At the commencement of the period under notice London was the centre of surgical activity, and the prominent exponents of the art at that time were John Abernethy, Henry Cline, Sir William Blizard, Sir Everard Home, Sir Astley Cooper, William Lawrence, and Charles Aston Key. The great John Hunter had died in 1793, having accomplished a work which marks an epoch in British surgery. In the provinces the most conspicuous surgeons were Edward Alanson of Liverpool and William Hey of Leeds, while in Edinburgh the position of the leading operator was held for many years by John Bell. A little later in the century we find among the names of prominent men in England those of Sir Charles Bell, Sir Benjamin Brodie, and the ingenious and learned Benjamin Travers. At the beginning of the century surgery on the continent was represented by such men as Sabatier, Deschamps, Boyer, and Larrey in France, Scarpa in Italy, Langenbeck, Chelius, and Dieffenbach in Germany, and Warren and Physick in America.

The surgeon or common practitioner in the village and town in these early days has been depicted by many writers. Possibly the most precise of these was Smollett who was himself in turn an apprentice, an assistant, a surgeon's mate, a practitioner, and a graduate in medicine. Smollett died in 1771. The account he has furnished of the leech of his time is tolerably discouraging. We find him an ignorant, illiterate, sordid creature, not above the allurements of money-grubbing and not without suspicion of dishonest practices and of a leaning towards the bottle. He was to a large extent a mere retailer of physic and in the public eye he ranked with the quacks and nostrum-sellers with whom he competed. There was probably some excuse for a writer who, in a discourse in the *New Monthly Magazine* for 1828, speaks of the general body of surgeons as a "cringing pulse-feeling race." Smollett's description could not have been true of all his brethren and there is no doubt he wrote with the bitterness of an unfortunate experience. Still, there can be little question that Launcelot Crab represented a type not yet extinct when the century began, and he must be taken as a forerunner of the cultured and esteemed general practitioner of the present day.

I.—THE SURGEON AS AN ADVISER.

In noting the advances made by the surgeon during the century the first matter which may be dealt with concerns his position as an adviser to his patient. In reviewing this subject one cannot fail to be immediately impressed by the paramount influence which exact knowledge—or *a fortiori* the want of exact knowledge—has had upon the attitude of the medical profession.

It is obvious that the progress of any science is to be measured by the amount of absolute truths which may have been accumulated at a given time. The lack of knowlege, the mass of things unknown, represent merely a void to be filled. In the development of the science of medicine the element of the unknown has not remained so negative a factor, but has, on the contrary, proved to be a stimulus for a very luxuriant invention, the products of which have been tabulated as facts. There is no science outside our own in which there has been during the stages of development such an extreme disproportion between the amount of knowledge professed and the amount proved ultimately to be exact and sound. As an example of this may be cited the "humoral" system of pathology which, in spite of its ancient origin and its more or less obvious foolishness, held a position in medicine for centuries and struggled on, as a distorted and dying creed, even into modern times. This system, in its barest features, asserted that four cardinal humours occupied the human body and that practically all diseases, and certainly all tumours, were due to disorders of certain of these fluids. The pathology of this system was precise, dogmatic, elaborately classified, and full of detail. Upon it all treatment was founded and yet the whole of this precious system was a mere daring fiction, an ingenious fancy, the product of an impudent and unscrupulous imagery. The reason for all this lies more with the sick man than with the man of medicine. The sick man requires absolute exact knowledge from his doctor. He will accept neither possibilities nor doubts nor confession of ignorance. He will accept such from his lawyer and from his man of business, but not from the man who attends him in illness. It is no matter of wonder that in the past the physician has made good by fiction what he lacked in fact. The demands of the patient have been hopelessly beyond any powers of supply, and the deficiency has been furnished by the products of invention. It would seem that the less the man of medicine knew the more he invented and the more diligently he hid his little light under the bushel of a ceremonious and mystery-making treatment. The judicial wig, the academic ruffle, the gold-headed cane, the reflective snuff-box, and the Socratic air all made an effective covering for the few poor bones which formed the skeleton of his knowledge. It thus happens that a good deal of the pretence and humbug with which medical practice has been associated in the past has been forced upon the practitioner by the demands of unreasoning people. With such people the surgeon in the early part of the century had more largely to deal than he has to do at the present day, and yet his stock of knowledge could seldom meet the demands even of the reasonable. Hereby it came to pass that the puzzled man of medicine had to repudiate his ignorance, had to concoct such explanations and to construct such pathologies as could meet the sick man's inquisitiveness, and at the same time give a semblance of reason to an empirical and tawdry system of therapeutics. His utterances were tangled and confused by conceits of his own invention. A false attitude towards his patient was unconsciously forced upon him, and the folly of his pretence to an unattainable learning was apparent to all but the simplest. As an adviser, therefore, he spoke not as one having authority, and his position intellectually is well illustrated by the endless lampoons and caricatures to which he was publicly subjected.

The surgeon of the present day, as an adviser, is in a position which is so greatly improved that it could hardly have been imagined by his forbears of 100 years ago. He has, in the first place, to deal with a more enlightened public, with patients whose education to a large extent enables them to appreciate the nature of scientific problems, and with whom it is possible to discuss difficulties and to own to lapses of information. In the second place, the additions made to surgical lore have been so substantial that in many departments surgery has reached to the status of an exact science. There is, indeed, no longer need to call upon invention to supply such gaps as still indicate the unknown. An intelligent patient is satisfied with the assurance that practically nothing at present is known of the nature and causes of cancer. Such assurance is at least as valuable as the information provided at the beginning of the century, when the inquirer would have been told that cancer was "a diseased hardness"[1] or a "scirrhous degeneration."[2]

We have perhaps not quite shaken off the poor vestments of mummery with which ignorance was clad nor rid ourselves of forms of speech which still pass current for sense but which are little more than sounding brass and tinkling cymbal. We speak assuredly of the "constitution" and of "states of the system" and of the "supporting of the system." We sanction such terms as "poverty of blood," "diminished vitality," and "sympathetic inflammation." We profess to believe in "tonics," in medicines the swallowing of which will give strength, in "galactagogues," in "alteratives," in "astringents," and in "cooling physic." We profess, moreover, to "strengthen the lungs" and give "tone to the stomach." The modern surgeon can well afford to dispense with all this empty verbiage, since he can base his opinion upon demonstrated facts and can express it

[1] Samuel Cooper's "First Lines," London, 1807.
[2] South's "Chelius," 1826-46.

in plain words, free from any of the embellishments of a literary masquerade. For many reasons this is well.

II.—THE SURGEON AS A MAN OF LEARNING.

The surgeon at the commencement of the century appears to have lacked most of what we now consider to be the essentials of the art, and we can only view with amazement the scantiness of his learning and the poverty of his equipment. He knew little more of inflammation than that it was represented by swelling, heat, redness, and pain. His knowledge of the causes of inflammation and of those dangers which follow upon open wounds was scarcely in advance of that professed in the days of Hippocrates. He had no glimmer of the possibilities of asepsis. He had no anæsthetics, no hypodermic syringe, no clinical thermometer, and no practical means of investigation in clinical chemistry. The very name "bacteriology" did not exist and the treatment of disease by prepared serums would have appeared to him as wild as the wildest therapeutic dream of ancient days. Although vaccination had been introduced in the last year of the eighteenth century the magnitude and nature of the principle it involved had not been appreciated. The microscope as an aid to diagnosis played no part in the equipment of the surgeon. He had neither laryngoscope nor ophthalmoscope and his acquaintance with otology, skin affections, and the diseases of women was at the best rudimentary and indistinct. He had only rude mediæval orthopædic appliances and he knew nothing of the lithotrite or of the array of instruments which are now in daily use in connexion with ophthalmic, laryngeal, cranial, and abdominal surgery. It would seem, indeed, that there was little for him to do but to open abscesses and sow the seeds of chronic septicæmia, to excise tumours of the structure of which he talked much and knew little, to amputate limbs for diseases he could not mend, and to draw blood whenever doubt existed as to what was best to be done. Conservative surgery was not understood and was certainly not practised, and plastic methods of operation had no place in treatment. Lord Thurlow, in speaking against the Surgeons Bill in the House of Lords in 1797, declared, with some basis of truth, that "surgeons in this country are not respectable men, their pretensions are unjust and illegal because they are not a scientific body."

In 1800 a man could practice as a doctor without passing an examination of any kind. Indeed, one itinerant practitioner is reported to have assumed the title of assistant surgeon on the ground that he had served an apprenticeship to the crutchmaker of a hospital. The examination for the diploma of the Royal College of Surgeons was by *viva voce* only. There was no examination of patients and no dissection of the subject. Candidates were required to produce evidences of apprenticeship, of attendance upon anatomical and chirurgical lectures, of having performed dissections, and of having attended the practice of a recognised hospital for a period of six months. In 1813 the period of compulsory attendance at a hospital was raised to one year. The standard of knowledge, however, does not appear to have risen in corresponding proportion, for in 1822 the then President, Sir William Blizard, felt called upon to address the Court of Examiners on certain "tokens of remissness in teachers and of inattention in students" which had been forced upon his notice. He regrets that candidates are commonly ignorant of the situation of nerves and blood-vessels, of the disposition of the muscular fibres of the heart, gullet, and stomach, and of the diameters of the intestine. He further adds that "the deficiency of candidates in physiological information is far more remarkable" and enters into such detail as the following: "Often do we find them," says the President, "ignorant of the reasons why the ribs in inspiration are, from their figure and muscular connexion, moved upwards and outwards, of the systole and diastole of the heart, of the process and intention of respiration, of the nature and distinction of the pulse, of the distinct offices of divers muscles, of the figure of the lens and uses of the humours of the eye in vision." He concludes by deploring that there is a "correspondent darkness of mind relating to the symptoms, seat, causes, and rational treatment of diseases and injuries," and furnishes a catalogue of items with which candidates do not appear to have been commonly conversant, although the list presents such matters as the signs of fractures and dislocations, the symptoms of compression and of inflammation of the brain, the consequences of fractured rib, and the *rationale* of the symptoms of hernia. At the commencement of the century there was, indeed, no systematised medical education. The training of the surgeon was paltry, casual, and inefficient. His preliminary education was miserably meagre. It was necessary that he should be able to read and write and pretend to some smattering of Latin. He became an apprentice, and in that menial capacity gleaned what he might from his master and from attendance upon sundry lectures. So far as hospital practice was concerned, his attitude as a learner was well expressed by the phrase, "He walked the hospital." The institutions which he thus attended for a period of six months were in a state of rude squalor as regards administration, sanitary arrangements, and nursing, and well deserved the abuse which was lavished upon them.

III.—THE SURGEON AS AN OPERATOR.

During the nineteenth century the surgeon as an operator passed through a rapid metamorphosis and has now reached at least the level of the unexpected. It may have been supposed that there is little to be learnt in the way of using a knife which had not been learnt during a period of over 1800 years, for there were surgeons before the Christian era. Yet time has shown that even in 1800 there was a technic in operating which was as little like the technic of to-day as are the slashes of a cutlass when compared with the studied movements of a foil. It may have been surmised that 20 centuries would have exhausted the methods by which a limb could be cut off. Yet in 1800 modes of amputation were in vogue which are now regarded as uncouth. It cannot even be said that the commencement of the century saw in use a ready and efficient means of checking bleeding, although that measure represents the most elementary of the surgeon's duties.

The operator of olden times certainly possessed many qualities which are now falling into abeyance and which cannot pass away quite unregretted. The success of his craft depended largely upon his daring, upon the alertness of his eye, the steadiness of his nerve, and the rapidity of his movements. He stepped into the arena of the operating theatre as a matador strides into the ring. Around him was a gaping audience and before him a conscious victim, quivering, terror-stricken, and palsied with expectation. His knife was thrust through living flesh and acutely-feeling tissues, and the sole kindness of his mission was to be quick. In spite of moans for mercy from gagged lips the knife had to move on its way steadily and, undeterred by struggles and bursts of hæmorrhage, the blade must needs pass without faltering or sign of hesitancy. There is less need for such qualities now. The dramatic element in surgery has gone with the men who unconsciously fostered it. The operating theatre of the present day has lost its horrors and has changed from a shambles to a chamber of sleep. The surgeon's hand can move with leisurely precision and theatrical passes of the knife are favoured only by those who have not yet learnt that mere brilliancy is no measure of success. It may be that the present-day surgeon is a loser in that he has less need for those dashing qualities which were essential to the operator before the days of anæsthetics; but, on the other hand, he has gained much in the direction of the sympathetic handling of his patient and in the culture of gentleness. It is little wonder if the older surgeon became rough and stern, if his sense of feeling became dulled, and if the sympathetic side of his nature suffered some suppression. Indeed, contemporary accounts are apt to represent the operator of pre-anæsthetic times as rough almost to brutality and as coarse both in his conduct and in his utterances. His language, it would appear, savoured of the cockpit, and the hasty flourishing of his knife led occasionally to unintended mutilations.

Within the compass of some thirty years the whole state of affairs has changed. Consideration for the patient and for the patient's sensibilities have become a matter of the first moment and the operator has learnt that his work is best done if done with gentleness and tact, and that haste and bluster, coarseness and coarse handling are out of place around the operating table. A striving after effect at any cost has ceased to be an element in the surgeon's work. Success is no longer to be measured by the number of minutes occupied in the amputation of a limb, but by the state of the patient many days after the measure has been completed. The triumph of the older surgeon was immediate and scarcely reached beyond the arena of the theatre. The triumph of the modern surgeon is deferred and is found in the operation ward and in the convalescent home. Still, the

fact remains that it is easier to be a surgeon of some degree at the end of the century than it was at the commencement, since in the earlier days the qualities needed for success in operating were rare and of a kind not readily to be acquired.

On passing more into detail one notices that beyond these general changes in the attitude of the operator there have been others which owe their existence to special advances in the surgeon's art. Prominent among these may be named: (1) an improved knowledge of anatomy; (2) a readier method of arresting hæmorrhage; (3) the employment of anæsthetics; and (4) the introduction of antiseptic measures.

1. *An improved knowledge of anatomy.*—Among the surgeons of the early part of the century there were many competent anatomists and not a few who could lay claim to be deeply versed in that science. Among the latter were such men as Astley Cooper and William Lawrence. Still, in the education of the average surgeon the study of anatomy did not play a prominent part. Anatomy was largely taught by means of public demonstrations. The teacher dissected and the student looked on, much as he did in the days when Rembrandt's great picture of Nicolaus Tulp and his pupils was painted. The knowledge required was scant and superficial and had little practical basis, and no methods of teaching existed which can in any way compare with those in vogue at the present day. The science of anatomy was well advanced at the commencement of the century, but it was not taught to the common student. Quain's "Anatomy," first published in 1828, contained a very sound account of the human body, although the whole work was then represented by a single small volume of 700 pages which was without illustrations. The facilities for acquiring a practical knowledge of anatomy were not only few but were hampered by many sordid difficulties. Anatomical schools were regarded with disfavour and were actively discouraged. They were viewed with unconcealed suspicion by the public and were surrounded by a ghoulish romance in which rifled graves and unseemly dealings with the hangman played a pungent part. Indeed, the teacher in an anatomical school found himself involved in a squalid and disreputable traffic, very uncongenial to any earnest man of science. Among the many qualifications needed for success in operating, a practical knowledge of anatomy as acquired by repeated dissection is conspicuous. Such knowledge as the surgeon needs is to be learnt not from books but from the patient use of the scalpel and forceps. The dissecting room is the surgeon's nursery. The tissues of the body are the material with which he works, and he must needs know them as the sculptor knows the marble he chisels and the potter the clay he moulds. It is no matter of surprise that the older surgeon often lacked confidence in operating, that he failed in initiative, and clung only to formulated methods, and that a departure from accepted lines was attended with fear and hesitancy. Ignorance encouraged in the rash heroic passages of the knife and in the timid an over-cautious and dangerous fumbling. And as to this it is probable that in pre-antiseptic days as much ill attended the nervous fingers which were creeping clumsily into the unknown as followed the reckless operator who essayed to draw his bow at a venture.

2. *A readier method of arresting hæmorrhage.*—At the commencement of the century the means employed for the control of bleeding were numerous and were represented by such familiar measures as the ligature, the sutures, styptics of many kinds, and the actual cautery. In applying the ligature the vessel was picked up by forceps and tied as at the present day. The instruments used were those of Dieffenbach, Assilini, and Liston. The older types of instruments were not readily applied, or at least required time in their adjustment. The bleeding from the vessel was not necessarily controlled by the forceps when in position. The general rule in amputation was to apply a tourniquet and to ligature the individual arteries after the limb had been removed. In the excision of tumours the practice was recommended of securing each vessel as it was divided. When it is remembered that operations were carried out without anæsthetics it will be understood that the older surgeon had an absolute terror of bleeding and was driven to undesirable shifts to avoid the need of facing it. He was indeed a coward where hæmorrhage was concerned, and there was reason for alarm when a conscious patient was struggling and showing signs of exhaustion and when the means for staying the stream of blood were slow of application. We find, then, that hæmorrhage was expected and that a liberal loss of blood was considered to be a necessary adjunct to every major operation. Tourniquets were employed freely and with considerable harshness. Raw surfaces were bathed with styptic solutions which were often destructive in their action or at least opposed to primary healing. The actual cautery with which to sear the bleeding area was in some request, and every well-equipped operating theatre kept its stove and its cautery irons in constant readiness. The least pleasant evidence of the surgeon's dread of hæmorrhage and of his inability to deal with it was afforded by the treatment of certain nævi in infants and children. These growths were strangled by ligatures which slowly cut their way through the skin and neoplasm assisted by a benevolent process of suppuration. A painful ingenuity was expended upon amplifications of this measure, the cruelty of which was but little mitigated by the introduction of chloroform. Allied to this procedure was the *écraseur* of later date. Its invention was due to Chassaignac, and it was freely used in England until quite recent times. It was employed for the removal of growths of various kinds, but its most baneful employment was as a means for excising the tongue. It is scarcely to be believed that within the period of the introduction of anæsthetics the tongue has been torn out of the mouth by means of a loop of hemp or wire which strangled it at its root. The *écraseur* will remain in the archives of surgery as the insignium of the incompetent and the timorous and will stand out as a blot in an otherwise bright period of progress and enlightenment. The shadow of this mediæval instrument has been slow to fade and as the ovarian clamp and the serre-nœud it clung about the confines of reasonable surgery and hindered the development of the operations of ovariotomy and excision of the uterus. At the present day the surgeon has little dread of hæmorrhage and the confidence he possesses is based upon good grounds. In the first place he makes larger use of the precautionary ligature of vessels. It has become a commoner practice to apply a temporary or permanent ligature to a main artery before a part supplied by that vessel is excised. This is carried out frequently in dealing with large and vascular tumours. In removal of the tongue, moreover, an excellent method is that in which a preliminary ligature of both linguals in the neck is carried out. In removing the uterus through an abdominal incision the question of hæmorrhage is disposed of by an early ligature of the ovarian and uterine vessels. A further example of this mode of anticipating bleeding is afforded by that method of hip amputation which is known as the anterior racket. Here the main vessels and even the main branches are secured before the flaps are cut, whereas by the older plan the vessels were severed with the flaps and were tied after the limb had been removed. In the second place the latter-day surgeon is operating upon an anæsthetised patient and can proceed with slowness and deliberation. The importance of this fact in connexion with the present subject cannot be over-stated. In the instances which have been just cited an excision of the tongue in a conscious patient would be greatly extended by the twofold operation in the neck, and whereas the amputation of the hip by transfixion occupied in able hands but a minute or so, the operation by the anterior racket is tedious and involves relatively much expenditure of time. Thirdly, the treatment of hæmorrhage has been to a remarkable extent simplified, if not indeed rendered complete, by the introduction of the pressure forceps of Sir Spencer Wells. These little instruments represent the most valuable addition which has ever been made to the surgeon's appliances. It is not uncommon in operations of a certain type to have 20 or more pairs of pressure forceps applied to the surface of the wound at one time. This represents a degree of possible bleeding which in the old days, when every vessel had to be separately tied, would have been replaced by actual bleeding of a fatal type. No instrument has brought with it so great an assurance of security or has done more to extend the area of safe operation.

3. *The employment of anæsthetics.*—The value of the anæsthetic and the radical and beneficent transformation it has effected in surgical practice call for no comment in this place. The changes that the discovery has wrought in the personality of the surgeon, in his bearing, in his methods, and in his capability are as wondrous as the discovery itself. The operator is undisturbed by the harass of alarms and the misery of giving pain. He can afford to be leisurely without fear of being regarded as timorous. To the older surgeon every tick of the clock upon the wall was a mandate for haste, every groan of the patient a call for hurried action, and he alone did best who had the quickest fingers and the

hardest heart. Time now counts for little and success is no longer to be measured by the beatings of a watch. The mask of the anæsthetist has blotted out the anguished face of the patient and the horror of a vivisection on a fellow-man has passed away. Thus it happens that the surgeon has gained dignity, calmness, confidence, and, not least of all, the gentle hand. Anæsthetics have, moreover, greatly extended the domain of surgery by rendering possible operations which before could have been only dreamt about, and by allowing elaborate measures to be carried out step by step. The introduction of anæsthetics has not only developed surgery but it has engendered surgeons. It has opened up the craft to the many, for in the pre-anæsthetic days the qualities required for success in operating were qualities to be expected only in the few. In the technique of established operations chloroform and its allies have led to advantageous changes. This is well seen in the case of amputations. In the olden days that method of removing a limb was best which was the most speedy. A prominent position was on this account given to the cutting of flaps by transfixion, a long narrow blade being used for the purpose. This rapier-like instrument required great skill in handling and in the grasp of the feeble it was a fearsome weapon. Muscles were sliced through in such a way that the widest possible section of their substance was often made. Vessels and nerves were, in like manner, cut almost in the direction of their long axes, and the resulting incision gave the maximum area of wounding. At the present day transfixion is abandoned and the murderous amputating knife has found its way into the museums of the curious. Muscles can now be severed at right angles to their length or in such a way as to secure the smallest possible surface of section. Vessels and nerves are cleanly divided in the same manner and the resulting area of the wound is reduced to a minimum. This difference in methods is vividly illustrated by amputation at the hip-joint.

4. *The introduction of antiseptic measures.*—Of the great work of Lister and of the introducing of the antiseptic treatment there is no call to speak at this time. When the century was young the touch of the operator was the touch of a tainted hand; the balm he poured into the wound was poisoned and he himself undid the good his science strained to effect. It is sad to think that behind the earnest man with the ready knife there stood a shadow which rendered hopeless his kindliest effort and which only too often proved to be the veritable shadow of death. The change has been great, and its greatness lies in its littleness, for it is bound up with no more than this: that the surgeon has learnt to be clean. The operator of days gone by would have turned with some petulance from the grand simplicity of the counsel to be clean. He ever sought some means of mighty bearing to rid him of the incubus of failure, and, like Naaman of old, he would have hesitated to dip in the Jordan of antisepticism to be free of his leprosy. The surgeon has not only learnt to be clean but he has become aware of the potency of little things. The demands of the antiseptic treatment have made him minutely careful, distrustful of any aid that he cannot control, and suspicious of any semblance of error. It is possible that the abandonment of the old easy order of things has been followed by a too slavish devotion to mere ceremonial. The remarkable and extravagant preparations with which some surgeons now approach an operation, the cleansings and the washings which precede the laying on of hands, smack a little of fetich worship and foster the cult of the surgical Pharisee. On the other hand, these performances, this "making clean of the outside of the cup and platter," seem to give assurance and to render the devotee thankful that he is not as other men.

IV.—THE SURGEON IN THE FUTURE.

Circumstances in the tendencies of to-day foreshadow to some extent what may lie buried in the future. The changes which have swept over the world of surgery have extended the possibilities of the art and have, at the same time, added a host to the ranks of those who practise it. Some 30 years ago the roll of such as could claim to be accomplished operators was very small. The greater deeds of surgery were limited to cities and the larger towns. The general practitioner seldom took up the scalpel except in minor necessities. Even in London the list of consulting surgeons was meagre. In the hospitals of the metropolis the number of operations performed in the year would be less than is now the quotum for a month.

But here at the close of the century the disposition of affairs is wholly altered. Where there was one surgeon there are now ten, and throughout the breadth of the land and to its utmost limits the work of the operator has extended. The more ambitious performances of surgery are no longer restricted to great centres but are carried out in the little town, in the cottage hospital, and even in the cottage itself. The general practitioner is laying claim to operate upon his own patients and is carrying out his intention in no hesitating manner. The days of the great operator, of the one man to whom all came who could, are rapidly passing away. Indeed, the practice of pure surgery, which was at one time limited to the prominent few, is now becoming common to the many. The man who excels conspicuously as an operator will always attain such eminence as his ability deserves, but the exclusiveness of the practice of operative surgery is quietly vanishing with the century. This change is well. It is a change that is inevitable. The democratic movement is the active power of the day, and that an oligarchy in the community of surgeons should be replaced by an earnest democracy is precisely in accord with the spirit of the times. In every great change there must—at first at least—be some undesirable developments, and it is impossible to deny that the wider distribution of the practice of operative surgery may lead to the occasional performance of major operations by men who are not justified, either by experience or by training, in undertaking them. Furthermore, there is, among the signs of the times, some evidence that the reaction in the matter of operative surgery is to some degree extreme and that we are in danger of passing from the policy of doing too little to the policy of doing too much. Operations we know were too few in the past, but there is some foundation for the impression that they are occasionally too frequent in the present.

One other matter which looms out of the future will suffice to bring this subject to a close. So many have been the artificial aids to clinical investigation which recent science has introduced that it comes to be a question whether the natural acumen of the surgeon will not deteriorate in proportion as he fails to encourage that particular learning which clings to the finger tips of all great diagnosticians. That there will be such a decadence is beyond doubt. The loss is to be deplored, for if there be one point of excellence which stands before all in the qualifications of the perfect surgeon, it is bound up in that refined sensibility, that critical perception, that inestimable cunning, which lies in the surgeon's touch.

Examples of the directions in which this loss will be felt come readily to mind. A considerable amount of skill, for example, is demanded in the examination of complex fractures, of lesions of deep-seated bones, and of injuries about joints. What was to be learnt of these troubles had to be acquired by a tedious manipulation demanding considerable refinement. The surgeon who has now to deal with such conditions can afford to dispense with a prolix examination and can submit the inquiry to a demonstrator of the Roentgen rays. The skiagraph, although its value is much exaggerated, embodies a substantial gain, but it is to be discounted by the loss of the great element in education which it is slowly replacing. An obscure tumour—to take another instance—presents itself and no longer is the surgeon compelled to trust to the acuteness of his inquiry and his patient review of all the physical details of the mass. For what his ready fingers may have learnt can be substituted the findings of the exploratory incision, the trocar, and the aspirator. Here once more an advantage is minimised by a loss. Or, again, an abdominal swelling is brought under notice. Its features are obscure, but much of the uncertainty of outline can be dissipated by a cultured hand which, with infinite patience and repetition, has learnt to construct a reality out of a shadow. It may be said that it is needless to persist in bringing this much elaborated means of inquiry to further perfection since the problem is at once to be solved by an exploratory laparotomy. By such little operation a great advantage is gained but an opportunity to add to one of the most refined forms of learning is lost. The value of the exploratory incision is beyond question, but among the signs of the times it is impossible not to notice a tendency to resort too readily to this means of solution. The Gordian knot, according to the legend, was ultimately cut, and it is a question whether the sum of human ingenuity would not have been substantially increased if attempts to untie the noose had been more diligently persisted in. In another example let it be supposed that a suspicious ulcer presents itself for diagnosis. In such case is it well to devote time

to a precise and tedious inspection of its edges and to a careful tactile examination of its base and to check what is discovered by results laboriously gained from like inquiries? Is it not simpler to take a scraping of the affected surface and to submit it to a microscopist, and thus to be spared a method of examination which, although it may not give final results, yet represents an opportunity of furthering a priceless accomplishment?

Finally, there are cases which present symptoms hard to interpret at any superficial inquiry. Is it worth while in such to undertake an exhaustive critical research and to submit the whole to a trained judgment? The quest would no doubt develop habits of observation and powers of weighing evidence; but the process is slow, and an inquiry carried out in a bacteriological laboratory will clear up all doubts and at the same time dispense with the efforts of a cultured sense. Those, therefore, who are concerned with the education of the surgeon of the future would do well to cherish still this ancient power and to foster a memory of the fact that surgery is, in its very essence, a handicraft, and that in all that he does the surgeon's great endeavour should be to make his own hands self-sufficing.

It is sad to think that this hardly-acquired faculty dies with the possessor of it, and never was this more vividly presented than it has been by the loss which surgery has sustained in the death of Sir James Paget. One can picture the great surgeon composed in his last sleep, and can see the once busy fingers lying lifeless on the white sheet, and then comes the wonder of the wealth of learning, at the exquisite cunning, at the refined sense which lay dead in the dead hand. No written book can hold a tithe of the dainty knowledge which had been mastered by those subtle fingers, and no record, however laboured or however loving, can tell of the power which once rested in that magic touch. An individual loss does not, however, hinder the general tide of progress. Advance in such a work as ours depends upon the uneventful work of the whole body and is only accentuated by the achievements of the prominent few. The movement is the movement of a multitude in which individuality is, at a distance of time, little to be distinguished and in which personal eminence contributes a smaller factor than the present is ready to acknowledge. Those who stand forth as the leaders of the advance are merely the elect of the common body and the representatives of a wide intellectual franchise. Even he who startles the world as a discoverer has often done little more than give expression to what was already nascent in the multitude. So as one great surgeon after another drops out of the ranks his place is rapidly and imperceptibly filled, and the advancing line moves on with still the same solid and unbroken front. The continuity of progress is undisturbed by the uncertainties of human life, and, as one writer has well expressed it—

"No work begun shall ever pause for death."

A CASE OF MENINGO-MYELITIS WITH BACTERIOLOGICAL EXAMINATION OF THE SPINAL CORD.

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AND

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THE acute onset and rapid course of many cases of meningo-myelitis are very strong indications of the infective nature of the disease. Several cases have been recorded in which a bacteriological examination of the spinal cord and meninges has revealed the presence of a micro-organism endowed with pathogenic properties. The total number of such cases is small and so we consider that the following case is worthy of being published in spite of the incompleteness of both the clinical record and the bacteriological examination.

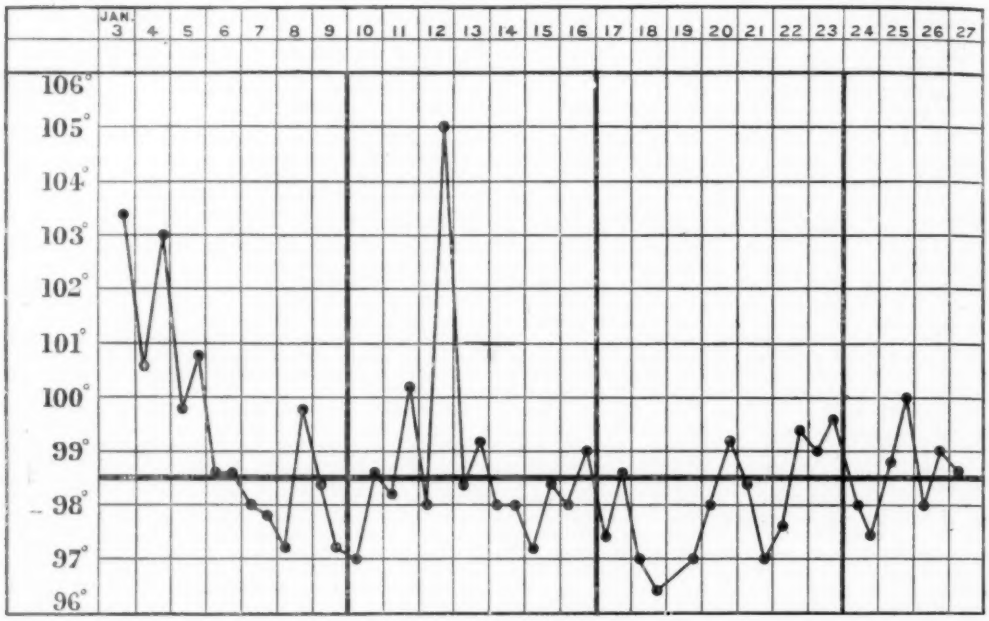
A single man, aged 29 years, was admitted into the Newcastle Royal Infirmary on Jan. 3rd, 1899, on account of complete loss of power and sensation in both lower limbs. A month previously when in his ordinary good health he was wakened in the middle of the night and called out to help at a fire in the village in which he lived. He quickly dressed, went out, and took his place in a line of men which was formed to pass buckets of water up to the scene of the fire. He worked hard at this for several hours, during which he got hot and exhausted in his arms and the upper part of his body, while his feet and legs were wet and chilled by the water which was accidentally spilled on them in rapidly passing on the buckets filled with water. After this he was seized with a severe pain in the lumbar region and the legs felt cold and numb. The pain was relieved by the application of blisters, but the sensation of cold and numbness persisted, being accompanied by a steadily increasing loss of muscular power, so that by the end of a week both legs were completely paralysed. This was shortly followed by some difficulty in micturition with constipation. At the end of a fortnight from the commencement of the illness there was retention of urine with loss of control over the rectum. Since then the regular use of a catheter had been necessary and the fæces had been passed unconsciously. The family history was unimportant and the only previous illnesses from which the patient had suffered were pleurisy and influenza.

On admission into the Infirmary a month after the beginning of his illness the patient lay on his back in bed complaining of a sensation as if a girdle were tied round him midway between the ensiform cartilage and the umbilicus and of pain in the lower part of the abdomen which was increased when the bladder became full. There was complete paralysis of both lower limbs and of the abdominal muscles as high as the umbilicus, combined with loss of all forms of sensation up to the same level. There was no control of the bladder, which if not emptied by means of a catheter filled and then overflowed. The control of the rectum was also lost, the fæces being passed unconsciously into the bed. The motor power of the muscles of the arms and neck and of the trunk above the level of the umbilicus was retained and the sensation of the skin covering these parts was not affected. The plantar and superficial abdominal reflexes up to the level of the umbilicus were absent, but the cremasteric reflex was still present. There was no ankle clonus; the knee-jerks were still present but the response was very slight and feeble. There was a large bed-sore over the sacrum. The urine was acid in reaction, but had a very foul smell and contained both blood and pus. The temperature on admission was 103·4° F.

During the first few days that the patient was in the Infirmary the condition remained much as above and the temperature fell to normal (*vide* Fig. 1). On the evening of the 11th there was a severe rigor, the temperature rapidly rising to 105° at 8.30 P.M. On the following morning the temperature was normal again, the pulse was 150, and the respirations were 28. The patient complained of difficulty in breathing and of pain in the lower part of the left side of the chest and at the epigastrium. The upper part of the chest expanded freely, but the expansion of the lower part was deficient. There was general tenderness on pressure all over the abdomen, which was most marked over the kidneys. The knee-jerks were still present and a slight plantar reflex could be obtained on the left side but not on the right. On Jan. 15th the patient began to hiccough and this continued for a week. On some days the hiccough only ceased for one hour out of every three or four and the hypodermic injection of the fifth of a grain of morphia only controlled it for a couple of hours at a time. On the 17th the upper limit of anæsthesia was found to run midway between the umbilicus and the centre of Poupart's ligament, at which level it subsequently remained. The pulse was 82. The abdomen was distended but resonant all over. The left plantar, the cremasteric, and the patellar reflexes could still be obtained, but the response was very feeble. The patient gradually got worse and on Jan. 24th the muscles of both legs were found to be much wasted, soft, and toneless. The plantar reflexes had disappeared and no knee-jerks could be obtained. After this the patient gradually sank and died at 11.30 A.M. on Jan. 27th, seven and a half weeks after the commencement of the illness.

Necropsy.—Unfortunately, no full post-mortem examination was allowed and leave could only be obtained to open the spinal canal and remove the spinal cord. This was done on Jan. 27th at 5.30 P.M., six hours after death. As soon as the spinal canal had been opened some of the lymph which was

FIG. 1.



Temperature chart of a case of meningo-myelitis.

lying on the surface of the dura mater in the upper dorsal region was raised from the dura mater by means of a pair of sterilised forceps, a platinum wire was pushed up between the two, and stroke cultures made on agar-agar and on serum-agar tubes. In this manner inoculations were made direct from the under surface of the layer of lymph, where it lay in contact with the dura mater. The dura mater was then opened with sterilised instruments and stroke cultures on agar were made in the same way from the surface of the pia mater in the mid-dorsal regions. Transverse cuts were then made across the cord with a sterilised knife in the dorsal region on a level with the roots of the fourth and fifth dorsal nerves, and also in the lumbar enlargement. A sterilised platinum loop was then pushed into the substance of the cord itself from the freshly-cut surface in each of these situations, and stroke cultures were made on agar-agar and on serum-agar tubes. After the spinal cord had been removed it was found that there was a communication between the spinal canal and the large bed-sore over the sacrum. This communication may, however, have been accidentally made at the time of the necropsy.

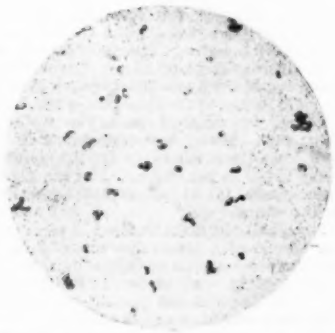
All the tubes were placed in the warm incubator at 37° C. on the same evening. After hardening, sections of the spinal cord from the dorsal region were cut and stained with picro-carmine and then by Weigert's modification of Gram's method. It was found that if the washing with aniline oil was carried on until all the violet colour had disappeared from the substance of the cord and pia mater the micro-organisms were also decolourised, but when the aniline oil was removed while the violet colour was still distinguishable to the naked eye in the pia mater the micro-organisms were well stained. In sections thus prepared large numbers of a small oval bacillus were seen in the pia mater. In some places the bacilli were stained at the extremities and clear in the centre, closely resembling diplococci. The bacilli were lying singly or in irregular chains. One or two longer rod-shaped forms were seen, but with this exception no other forms were found. The oval bacilli were also seen in small groups here and there in the white substance of the cord itself and separated from the pia mater, but the further from the surface of the cord the fewer the groups became.

Cultures.—The tubes were inoculated and placed in the incubator at 37° C., as already mentioned, on the evening of Jan. 27th. No visible growth had appeared on the 28th, but on the morning of the 29th, after the tubes had been about 40 hours in the incubator, colonies had appeared in all the tubes except in one tube of serum-agar inoculated from the substance of the lumbar enlargement. In this tube, however, a growth had also developed by Feb. 1st. Ten tubes in all had been inoculated from the meninges and from the cord itself. In eight of these the growth proved on microscopical examination to be a pure culture of a short oval bacillus. The other two showed similar growths, but in one of them it was mixed with a few larger and longer bacilli, and in the other with some chains of streptococci. As far as naked-eye appearances went the growth in each of the pure cultures had the same appearance. On microscopical examination slight differences in appearance were found in the different cultures. In all the bacillus was short, the length not being more than double the breadth, though there was some difference in the actual size in different specimens. Slight differences were also due to different degrees of staining; in some cases the oval bacilli were stained all through, in others the ends only were stained and the centre clear, so that they resembled diplococci. We consider, however, that they are rightly described as short oval bacilli with polar staining. The appearance is well shown in Figs. 2 and 3, micro-photographs which were kindly taken for us by Mr. H. R. Spitta. Fig. 2 was taken from a film prepared from a pure culture obtained directly from the substance of the spinal cord on a level with the roots of the fourth dorsal nerve. Fig. 3 was taken from a film preparation from a pure culture obtained from a guinea-pig's blood after subcutaneous inoculation with a broth sub-culture obtained from the growth shown in Fig. 2. In the hanging drop the bacillus was seen to be motile. It grew readily at 37° C. on nutrient agar. Isolated colonies on agar at the end of 40 hours in the incubator were small and translucent and resembled minute droplets of condensed moisture. They became rather milky in appearance when older. In a uniform stroke culture a translucent slightly opalescent layer was found at the end of 48 hours. At ordinary temperatures it grew in gelatin which it liquefied.

Inoculations.—The pathogenic properties of the bacillus were tested in a guinea-pig and in a rabbit. For this purpose a tube of nutrient broth was inoculated from the agar

culture obtained from the substance of the spinal cord in the upper dorsal region and incubated at 37°C. for 24 hours. At the end of this time an abundant growth of bacilli had taken place in the broth. One cubic centimetre of this broth culture was injected with the usual antiseptic precautions beneath the skin of the inner side of the thigh of a brown male rabbit, and a similar quantity of the same culture was also injected into a red-and-white male guinea-pig in the same situation. On the following day the guinea-pig looked ill, the temperature in the morning being 100·6°F., and in the evening 99·4°. On the next morning it was found dead in

FIG. 2.



Film preparation of culture obtained from substance of spinal cord.

the cage. No naked-eye changes were found at the post mortem examination. Films were prepared from the blood from the heart and stained. Agar tubes were inoculated from the blood in the heart, and films were prepared from the cultures which developed. On microscopical examination of the blood a few widely-scattered micro-organisms which resembled diplococci without any capsule were found. In the hot incubator a pure culture of the original bacillus developed on agar, so that the micro-organisms in the blood were really bacilli with polar staining and not diplococci, the actual form being more easily seen in pure cultures than in the blood itself.

FIG. 3.

Film preparation of culture obtained from blood of guinea-pig after inoculation.

Fig. 3 shows the specimen prepared from the agar culture obtained from the blood of the guinea-pig. In the case of the rabbit, on the day after the inoculation the temperature in the morning was 102° and in the evening 104°. The animal was very quiet and the respiration was rapid and laboured. The following morning the temperature had fallen to 100·2° and a swelling had formed at the seat of the inoculation. After this the temperature only varied between 100° and 101°. On the fourth day after the inoculation the right side of the scrotum was swollen and the rabbit was killed. The right tunica vaginalis was distended with thin serous fluid and the right testicle was swollen. A slough had formed at the seat of inoculation. Tubes were inoculated from the heart blood and from the tunica vaginalis. No colonies developed from the blood but an abundant pure growth of the original bacillus developed in the tube inoculated from the tunica vaginalis. In the guinea-pig, therefore, the subcutaneous inoculation of a pure culture of the bacilli produced a rapidly fatal general infection without local reaction, whereas in the rabbit there was no general infection, but a local reaction, with sharp rise of temperature, limited to the neighbourhood of the inoculation. No nervous symptoms were observed in either of the animals.

The characters of the micro-organisms may be shortly summarised as follows. A short oval motile bacillus which stains readily by aniline dyes, the stain in many cases showing a much stronger affinity for the ends than for the centre of the bacillus. It can with care be stained by Gram's method and was found in large numbers in the pia mater and also in lesser numbers in the substance of the cord. Pure cultures of the bacillus were obtained both from the meninges and also from the substance of the cord itself. Subcutaneous inoculation caused rapid general infection in the guinea-pig and a local infection in the rabbit. The bacillus grows readily on the ordinary nutrient media in both the hot and cool incubators. It liquefies gelatin.

In this case we have a clear history of an acute onset of the meningo-myelitis following an exposure to cold and wet combined with fatigue. The similarity to the sequence of events often observed in the development of an attack of acute lobar pneumonia is striking, so that it seems very probable that the myelitis, like a pneumonia, was the result of an infection occurring as a result of a temporary lowering of resistance. This view is strongly supported by the presence of a micro-organism in the meninges and spinal cord, which we have shown was undoubtedly possessed of pathogenic properties.

Micro-organisms have been found and cultivated in several cases of acute meningo-myelitis, notably in the case so well recorded by Dr. T. Buzzard and Dr. Risien Russell.[1] They obtained a culture of a diplococcus in one tube which was inoculated from the meninges in the lumbar region, the other tubes showing no growth. The organisms seem to have been less numerous than in our case, as growth developed in all the tubes we inoculated. Similar diplococci were seen in stained sections in the exudation, in the meninges, and in the substance of the cord, just as in our case. The organism in our case differs from that found by Buzzard and Russell in that it more nearly resembled a bacillus with polar staining than a diplococcus—a difference that is perhaps more apparent than real—it liquefies gelatin, and can be stained in sections by Gram's method. It differs from Weichselbaum's diplococcus intracellularis in appearance and, unlike it, grows in the cool incubator and does not appear within the cells of the exudate.

In Dr. E. F. Trevelyan's case[2] a diplococcus was obtained from the pus outside the dura mater and also from a softened patch in the cord; the bacteriological examination was, however, not carried further as the micro-organisms died in a few days.

The value of the bacteriological examination in our case is, of course, much diminished by the fact that the bed-sore was in such close proximity to, if not in actual communication with, the spinal canal, but we consider that if the infection of the cord had been secondary to the foul bed-sore the cultures would have been mixed and not pure in all except two tubes, as was the case. The evidence we at present possess goes a long way to show that acute meningo-myelitis is probably an infective disease, and although it cannot as yet be attributed to any single organism the bacteria which have been found in the recorded cases appear to have certain characters in common.

Newcastle.

[1] Transactions of the Clinical Society of London, vol. xxxi., p. 185.
[2] Brain, Part lxxxviii., 1899, p. 607.

LOCAL SANITARY AUTHORITIES AND THE MILK-SUPPLY.—The bacteriological examinations conducted by the St. Pancras Vestry have proved that out of 50 samples only 16 were normal, five contained tubercle bacilli, and the remainder from various causes were not fit for human consumption.

A BLOOD REACTION IN DIABETES MELLITUS; ITS CAUSE AND DIAGNOSTIC VALUE.

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IN 1896 I recorded[1] a reaction which I believe to be peculiar to the blood of patients suffering from diabetes mellitus. A drop of blood taken from the finger of a diabetic patient decolourises a warm alkaline solution of methylene blue, when mixed in certain proportions, whilst blood from healthy persons or from individuals suffering from other diseases has no such action when mixed in the same proportion. The reaction is due to the greater reducing power of diabetic blood and is obtained as follows. At the bottom of a small, narrow test-tube is placed a drop of water—40 cubic millimetres. To this are added 20 cubic millimetres of blood taken from the finger of the diabetic patient. Then 1000 cubic millimetres (one cubic centimetre) of a watery solution of methylene blue (1 in 6000), and finally 40 cubic millimetres of liquor potassæ (B. P.) are added. Into a similar tube are placed 20 cubic millimetres of normal blood with the same proportions of methylene blue and liquor potassæ. The mixed fluids in each tube will have a fairly deep blue or bluish-green colour. Both small test-tubes are placed in a beaker or very large wide test-tube containing water and the water is heated and kept boiling for four minutes. At the end of this time the fluid in the small test-tube containing the diabetic blood will have lost its blue colour and become dirty yellow, whilst that in the tube containing non-diabetic blood will remain blue or bluish-green. (The exact quantities of the fluid used may be measured by the small tubes supplied with the hæmocytometer and hæmoglobinometer of Gowers.)

I have examined the blood in 43 cases of diabetes mellitus and have always obtained the reaction mentioned. I have examined the blood in 100 cases of other diseases of the most varied forms and also the blood of healthy persons on innumerable occasions, but, when the fluids have been mixed in the proportion above stated, have never obtained the reaction. My results have been confirmed in Germany by Loewy,[2] Goldscheider,[3] and R. Müller[4]; in France by Le Goff,[5] P. Marie, Lyonnet,[6] and Lépine: in Italy by Baduel and Castellani,[7] Ferrannini,[8] and Lucibelli[9]; and in America by Futscher[10] (in Professor Osler's clinic). Further observations which I have made indicate the cause and diagnostic value of the reaction.

CAUSE OF THE REACTION.

1. This reaction, peculiar to diabetic blood, is evidently due to the presence of some substance in solution in the blood serum. Large quantities of blood obtained post mortem from the internal jugular vein of three cases of diabetes mellitus were allowed to stand until the serum separated on the surface and the red corpuscles sank to the bottom of the vessel. In each case the blood serum, free from red corpuscles, gave the reaction—i.e., decolourised methylene blue in the proportion given above—whilst the serum obtained in a similar manner from non-diabetic blood gave no reaction (in the proportions mentioned).

2. Blood serum from a diabetic subject loses the power of giving the reaction after it is submitted to the action of yeast. In three cases of diabetes mellitus large quantities of blood were taken post mortem from the internal jugular vein and allowed to stand for 24 hours until the serum had separated. In each case two test-tubes of the usual size were half filled with the diabetic blood serum. To one test-tube ordinary German yeast was added, to the other no yeast was added. Both were kept in a warm place, side by side, for 48 hours, the mouth of each tube being plugged by cotton-wool. At the end of 48 hours the serum in the test-tube containing the yeast gave no reaction with methylene blue (according to the method above described), whilst 20 cubic millimetres of the serum in the tube which contained no yeast gave the reaction readily. The same results were obtained by the blood serum in all of the three cases of diabetes. The diabetic serum which had been submitted to the action of yeast and which did not decolourise methylene blue gave no reaction for sugar with Fehling's solution; whilst the diabetic serum to which no yeast had been added and which continued to give the reaction with methylene blue above described, gave a slight but distinct reaction for sugar with Fehling's solution. The failure of the diabetic serum, after the action of yeast, to give the methylene-blue reaction was not due simply to the presence of the yeast-cells in the fluid, since diabetic serum when mixed with yeast and tested immediately gave the methylene-blue reaction distinctly. Hence we may conclude that the diabetic serum loses its power of giving the methylene-blue reaction, owing to the fermenting action of the yeast fungus, which in the course of 24 or 48 hours destroys some substance in the serum.

3. After the proteids of diabetic blood or serum have been separated, by boiling with crystalline sulphate of soda and filtering, the filtrate gives the methylene-blue reaction. A number of observations were made on the blood obtained post mortem from the internal jugular vein in a case of diabetes. In each examination an ounce or more of the blood or serum was mixed with an equal quantity of crystalline sulphate of soda and the mixture was boiled until the froth above the clot became white and all red specks disappeared. In every examination 20 cubic millimetres of the clear filtrate gave the methylene-blue reaction above described. When non-diabetic blood was treated with sodium sulphate in the same way the filtrate failed to give the methylene-blue reaction.

4. After the separation of the proteids of diabetic blood the power of giving the methylene-blue reaction is destroyed by the action of yeast. In another experiment, two test-tubes were half filled with the clear filtrate, obtained after separating the proteids of diabetic blood by boiling with sodium sulphate, as just described. To the fluid in one test-tube a little German yeast was added, while to that in the other tube no yeast was added. The mouth of each tube was plugged with cotton-wool and the tubes were kept in a warm place for 48 hours. Then the fluid in each tube was examined for the methylene-blue reaction above described. 20 cubic millimetres of the fluid from the test-tube of filtrate to which yeast had been added gave no reaction; 20 cubic millimetres of the fluid from the test-tube to which no yeast had been added gave the reaction markedly. The fluid in the test-tube to which yeast had been added gave no reaction for sugar either with Fehling's solution or phenyl-hydrazin, whilst the fluid in the other test-tube, to which no yeast had been added, gave a reaction for sugar both with Fehling's solution and phenyl-hydrazin.

5. It is well known that glucose has the power of reducing a warm alkaline solution of methylene blue. 20 cubic millimetres of a watery solution of glucose (5 in 1000) gave a distinct reaction with the methylene-blue test; but 20 cubic millimetres of a 2·5 in 1000 solution did not. When 20 cubic millimetres of the 2·5 in 1000 solution of glucose were added to 20 cubic millimetres of normal blood, the mixture decolourised the alkaline methylene blue like diabetic blood, but 20 cubic millimetres of the blood alone, or of the 2·5 in 1000 glucose solution alone, failed to give the methylene-blue reaction.

6. Though non-diabetic blood does not give the methylene-blue reaction in the proportions stated at the commencement of this article, it has nevertheless some reducing action in larger quantities. In performing the methylene-blue blood test it is always necessary to measure accurately the quantity of blood employed (20 cubic millimetres), since the diabetic reaction depends on the greater reducing power of the diabetic blood. As already stated, I have never obtained the reaction when 20 cubic millimetres of blood were employed, in any condition except diabetes mellitus. But with normal blood a reaction may be obtained when 60 cubic millimetres of blood are employed in performing the test; also

[1] Brit. Med. Jour., Sept. 19th, 1896.
[2] Berliner Klinische Wochenschrift, 1897, No. 46, and Fortschritte der Medicin, 1898.
[3] Deutsche Medicinische Zeitung, 1898.
[4] Münchener Medicinische Wochenschrift, 1899, No. 25.
[5] Bulletin et Mémoire de la Société Médicale des Hôpitaux de Paris, 1897, No. 16 and No. 17; Sur certaines Réactions Chromatiques du Sang dans le Diabète Sucré, Paris, 1897, pp. 44 to 81.
[6] Lyon Médical, 1896, tome lxxxiii., p. 187.
[7] Centralblatt für Innere Medicin, 1898, No. 28, and Settimana Medica, 1898, No. 10.
[8] Riforma Medica, 1897, No. 248 and No. 249; Centralblatt für Innere Medicin, 1898, No. 28.
[9] Gazzetta degli Ospedali, 1899; and Brit. Med. Jour., Epitome Jan. 27th, 1900.
[10] Philadelphia Medical Journal, 1898, No. 7

60 cubic millimetres of normal blood serum decolourise the methylene-blue solution. (20 cubic millimetres of serum have no action, just as in the case of 20 cubic millimetres of blood.) Hence there is also some substance in normal blood that has a reducing action when a sufficient quantity of blood is employed. This substance is in solution in the serum. But it is not simply the minute quantity of glucose, of normal or non-diabetic blood, since this reducing power is not destroyed by the action of yeast. Thus, two test-tubes of ordinary size were half filled with blood obtained post mortem from a case of aneurysm. To one test-tube yeast was added; to the other no yeast was added. Both were kept in a warm place for 48 hours. At the end of that time 60 cubic millimetres of blood from *each* tube reduced the methylene-blue solution readily. Hence there is a substance in non-diabetic blood, beside the minute quantity of sugar, which has some slight reducing action on methylene blue.

7. It is interesting to note that 20 cubic millimetres of diabetic urine gave the methylene-blue reaction markedly, whilst 20 cubic millimetres of the same diabetic urine in which the sugar had been decomposed by the action of yeast no longer gave the methylene-blue reaction; also 20 cubic millimetres of normal urine did not give the methylene-blue reaction.

Briefly summarised the results of the observations recorded may be stated as follows. The methylene-blue reaction, carried out with the proportions of fluid stated at the commencement of this article, may be obtained with a solution of glucose; it is obtained with diabetic urine, with diabetic blood, with diabetic blood serum, and with the filtrate from diabetic blood when the proteids have been separated by boiling with crystalline sodium sulphate. All of these fluids after the action of yeast fail to give the reaction. As already mentioned, when a dilute solution of glucose is added to normal blood the methylene-blue reaction is obtained. All these facts indicate that the methylene-blue reaction given by diabetic blood is due to the excess of glucose which it contains.

CLINICAL AND PATHOLOGICAL VALUE OF THE REACTION.

The methylene-blue reaction of diabetic blood is exceedingly delicate and may be obtained even when the urine contains only a very small quantity of sugar. Usually there is no difficulty, however, in diagnosing diabetes mellitus clinically. The examination of the urine is generally sufficient. The methylene-blue reaction of the blood is present in diabetic coma, and in this condition if the urine could not be obtained for examination (i.e., if the bladder should be empty) the blood reaction would be diagnostic. R. Müller[11] has recorded a case of diabetic coma in which the diagnosis was definitely made by the blood reaction which I have described, the bladder being empty and no urine being obtainable.

In the post-mortem appearances of persons dying from diabetes there is nothing characteristic. In the case of an individual dying from diabetic coma, if no history of the diabetic symptoms before the onset of coma could be obtained and if no urine could be found in the bladder nor any obtained which had been passed before death, a pathologist would not be able to diagnose the disease from the post-mortem appearances. Such cases, no doubt, have sometimes remained unrecognised in the past, and probably some of the obscure cases in which post-mortem examination made for the coroner has failed to reveal a satisfactory cause of death have been due to diabetic coma. The methylene-blue blood reaction in such cases would be diagnostic.

In five cases of diabetes mellitus I have removed blood from the internal jugular vein post mortem, and in every case 20 cubic millimetres of the blood gave the methylene-blue reaction markedly. Further, it is an interesting practical point that the reaction is obtained many hours after death. Thus in a case of diabetic coma in which the post-mortem examination was made 16 hours after death three ounces of the blood were placed in a bottle. Three days later the methylene-blue reaction was obtained markedly. In another case, blood removed from the internal jugular vein 10 hours after death gave the methylene-blue reaction after it had been kept in a bottle for a week. The reaction, of course, is obtained early as well as later. I obtained it in one case in the blood taken from the internal jugular vein three hours after death. I have examined the blood taken post mortem from the internal jugular vein of 20 individuals dying from various other diseases but have never obtained the reaction.

Hence this reaction may be of practical diagnostic value, pathologically and medico-legally, in certain cases. I think it is advisable, when the blood is examined post mortem, to always take it from the internal jugular vein. Blood from this vein is not liable to be contaminated by other fluids during the necropsy. It is possible, also, that this delicate reaction may be made the basis of an easy method of estimating the amount of sugar in the blood. Two methods have already been worked out by Lyonnet and Le Goff, but it remains for future observations to show whether these methods are more delicate and reliable than those commonly employed.

Manchester.

[11] Münchener Medicinische Wochenschrift, 1897, No. 25.

THE ETIOLOGY OF SCURVY.

BY W. E. HOME, B.Sc., M.D. EDIN.,
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I SHOULD like to offer some remarks on the very interesting paper of Mr. F. G. Jackson and Dr. V. Harley on Scurvy which appeared in THE LANCET of April 28th and to submit a suggestion as to the etiology of this important disease which has become so rare that I cannot be quite certain that I have ever seen a case. The orthodox view is that it occurs in people who live on a diet deprived of green vegetables or potatoes, its onset being accelerated by preceding hardships, while it is prevented by a daily ration of lime-juice and cured by lime-juice or fresh vegetables. Torup and Nansen suggested that it might arise from ptomaine posioning, which was noted in THE LANCET of Feb. 13th, 1897, as a new departure, and this suggestion Mr. Jackson and Dr. Harley endeavour to support by their research reported in THE LANCET of April 28th. They fed six monkeys on sound meat and 13 on tainted meat and in these last found evidences of scurvy—namely, as they say, bloody mucus in the stools, spongy gums, and characteristic anæmia; also there were post-mortem appearances of irritation in the mouth (spongy gums—that is to say, I suppose, inflammation of the gums—going on to ulceration) and irritation of the large intestine. They consider their observations support the theory that "scurvy is essentially due to poisoning by the ptomaines of tainted animal food." In their experiments, however, they did not take care to administer ptomaines only, but as the "sour-smelling meat" on which the second lot of monkeys were fed had not been sterilised, only as they say "gently heated," the monkeys got not only ptomaines but also the living bacteria which produced the ptomaines. What is there, then, in these experiments to prevent us from believing that the bacteria of putrefaction were taken alive into the mouths of the monkeys, there infecting the sordes round the teeth and setting up gingivitis, going on to ulceration, infecting also the gastro-intestinal canal later, these parasitic infections setting up the anæmia on which all the other symptoms of scurvy depend? Anæmia is generally the effect of the struggle of the organism against some infection. How pale a person becomes after suffering for a couple of days from a large boil, and think of Hunter's most valuable researches into the etiology of pernicious anæmia and Sir Andrew Clark's explanation of chlorosis. Clearly the anæmia will develop all the faster if the victims are, as so often happens in epidemics of scurvy, on short rations, particularly if they are taking in fresh doses of the poison with each scanty meal, and they probably were taking in fresh doses with each mouthful, for Lind describes their beef as rotten, their pork as rancid, their flour as mouldy, and their water as unwholesome. And Gillespie describes the beef the men had to eat in the Persian Gulf as so rotten that it could not properly be boiled. They tied it up with strings but it fell out of them, wherefore their Arab pilot greatly pitied them and preferred rather to go ashore where there was a great epidemic of plague than to remain in their ship where he could get no other food.

It is curious that in the same number of THE LANCET (April 28th) there should be an account of a case of pernicious anæmia associated with, and in the opinion of Dr. W. Elder mainly due to, neglected state of the teeth, cured by buccal antisepsis, anti-streptococcic serum (the

most evidently beneficial treatment), and salicylate of bismuth. We have all heard stories of leading consulting physicians who have refused to advise patients suffering from dyspepsia till their teeth were put in order. Have we not now a scientific reason for this seemingly arbitrary action by the practical man?

I am greatly interested to have this suggestion that the initial lesion of scurvy is an affection of the gums; it harmonises much of the contradiction which exists in the historical pathology of this disease. I would submit as a nearer approximation than we have yet had to the true etiology that scurvy is caused by micro-organisms "as yet unknown" which infect the alimentary canal, setting up primarily a gingivitis and later an anæmia which leads to hæmorrhages and predisposes to ulcerations, more frequently threatened as these last were in ships where long cruises with their scarcity of provisions and of water made cleanliness much more difficult. These micro-organisms may be destroyed by antiseptics. (Osler recommends permanganate of potash and dilute carbolic acid for the stomatitis and solution of nitrate of silver for the ulceration of the gums.) Lime-juice cures scurvy either specifically (as quinine antagonises the malarial organism or as mercury resists syphilis) or it may act as an antiseptic which can be taken into the mouth and swallowed strong enough to do the mouth good and destroy the parasite without doing the rest of the body harm. That it is useful I suppose no one will deny, but as many people have forgotten why we think so I may narrate Dr. Gallenaud's experiences. In the *Psyché*, in the White Sea, in 1854, he had a severe epidemic which only ceased when the vessel returned to France. Next year in the *Cléopâtre* he was threatened with a more serious epidemic, but Dr. Murray of the *Meander* told him about our lime-juice and got for him 11 gallons from the *Meander* and *Phœnix*, by the help of which he put a stop to the epidemic in the *Cléopâtre*, and the French Admiralty was so convinced by his experiences of the usefulness of lime-juice that they made it a general issue to their fleet.

But why should lime-juice be so beneficial? It is not only an acid but also contains aromatic principles, and each of these classes of substances has been used to cure scurvy. Cook (1772) preserved his crew with sauerkraut; Lind (1779) besides lime-juice recommended vinegar; Blane (1785) (like Lind, an M.D. of Edinburgh) mentions sowens as anti-scorbutic. (There was scurvy in Ladysmith; was there any or as much in Mafeking?) So much for the acids. As to aromatics, the anti-scorbutic plants mentioned are generally cruciferæ. Lind recommends the surgeon to grow mustard and cress on blankets and to give a daily ration of these plants. Cochleariæ are often mentioned; they include not only the various scurvy grasses, as they were called of old, but the nowadays better-known horseradish, and, as we have seen, Osler recommends antiseptics for the treatment of the gums. It may well be that both classes are required. I find that ulcers heal up more quickly when one is not too devoted to a single antiseptic, however potent; most ulcerations result from a mixed infection or symbiosis and are best cured by different antiseptics used alternately, and lime-juice may be the best anti-scorbutic because of its double nature and varied antiseptic effect. Employed as a mouthwash at bedtime it certainly is useful—I suppose as an antiseptic in the prevention of the buccal catarrh commonly ascribed to over-smoking, and very apt to follow late and prolonged dinner-parties. Easton's syrup diluted I have found more effectual, but it is more difficult to insure that your patient shall use it.

In relation to the antiseptic effect of the oils of the cruciferæ I may say that in a small prison in which I once worked we recognised, we thought, an epidemic gastro-intestinal catarrh in the treatment of which we were using up all our peppermint and bitter stomachics until the prisoners got mustard added as a condiment to their daily allowance of three-quarters of a pound of cooked beef, when the fermentative dyspepsia was, as we had expected, checked without drugs. The dyspepsia-causing germ, which thrives best in beef-chyme, grows strongly in the stomachs of people who eat no meat but beef; to depress it we have learnt by experience to take mustard or to vary our diet. I suppose that the germ that thrives best in mutton-chyme is less well antagonised by mustard and that therefore it is we do not eat mustard with mutton. So the old gibe: "Mustard with mutton! Naval officer, I presume," dates back to a day when naval officers, always at sea blockading and living on beef and pork, had not enough experience of mutton to know that mustard was not its appropriate antiseptic condiment. I suppose, too, that the principle of the varying of diet which I mentioned above explains why children, dyspeptic while living exclusively on milk, are often cured by raw meat juice. The infecting organism, which probably entered the stomach with milk and has been living in milk-chyme, finds the environment less favourable when raw meat juice replaces milk, is weakened and now more easily destroyed by the remedies formerly powerless against it.

Since I have read William Hunter's papers on pernicious anæmia I have realised more clearly than even before how important a factor in the causation of tropical anæmia and debility is the infection of our alimentary canals by the saprophytes which so plentifully surround us in those regions of luxuriant vegetation. From these infections the natives strive to save themselves by eating curries and chewing peppers and other "hot things"—that is, aromatic antiseptics. The diarrhœa of Hong-Kong is a proverb—a tradition I myself believe of the time before 1888, when the gravitation supply of upland surface-water was brought in. Still, there is a good deal of diarrhœa which is best treated antiseptically with carbolic acid on Colonel Quill's plan, or with boric acid for the stomach, salol for the small intestine, and enemata of copper sulphate or boric acid for the colon and rectum. It is also worthy of note that many of the Eastern races of greatest vitality, as the Chinese and the Indian, are, as I have seen them, most careful about the morning cleaning of their teeth; the Chinese in addition scrape their tongues with a "strigil," generally attached to the tooth-brush by a chain. The Indians at Zanzibar sit at their doors in the early morning and chew tooth-sticks, with which they poke and rub out all the sordes. In their slow, methodical, and thorough operations they greatly remind me of a former shipmate, the most minutely clean person I have ever known, who used always after breakfast to sit himself down in his cabin for five minutes with a strong toothpick, allowing nothing at this important period to distract his attention from an essential duty. He was certainly more healthy than were most of us.

The only well-known fact about scurvy which I am quite unable to explain by the theory of primary infection of the gums cured by antisepsis is the value of the potato as an anti-scorbutic. Raw or cooked it seems almost as efficient as lime-juice, yet it is not, so far as I know, an antiseptic.

In conclusion, I may recapitulate and say that I suggest that scurvy is essentially an infection of the mouth with micro-organisms out of decayed food, antagonised by lime-juice and fresh vegetables which act as antiseptics, this infection of the mouth being most apt to occur in times of hardship when cleanliness is least within our reach.

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ON THE LIMITATION OF PHYSICAL METHODS IN THE INVESTIGATION OF THE PHYSIOLOGICAL AND PSYCHICAL PHENOMENA OF SIGHT.

BY F. W. EDRIDGE-GREEN, M.D. DURH., F.R.C.S. ENG.

IN a paper published in THE LANCET of May 26th (p. 1511) I showed how difficult it was to correctly ascertain the colour perception of any person if we ignored colour names. In this paper I wish to show that in investigating physiological, psychical, and pathological phenomena we must employ methods which are suited to the case in hand and not those which are so admirably adapted to the study of the physical phenomena themselves. We talk of light and heat as if they were two different things, but the difference exists in us, not in the physical stimuli giving rise to the sensation. The physical stimulus is that force which, acting upon the body, gives rise to a sensation. For instance, the force which, acting upon the eye, gives rise to the sensation of light when falling upon the back of the hand gives rise to the sensation of heat, and may when falling upon the back of the head covered by hair give rise to no sensation whatever. Again, different physical stimuli

may cause the same sensation as a blow on the eye causing the sensation of light. Many years ago a well-known physicist who was discussing my views on colour-vision remarked: "I explain the Young-Helmholtz theory in the following way to show how by the admixture of three constituents we can form all colours. If we take whisky, sugar, and water we can by mixing them in varying proportions obtain mixtures of an unlimited number, each differing from the other." But he was entirely overlooking the man who had to taste the whisky. The mixtures which could be made are innumerable, but the number of distinct mixtures which could be recognised by any person are very limited. In the case of a man who has been accustomed to take a glass of whisky every day for 20 years it is improbable that the constituents were twice alike, viewed from a physical standpoint, but to him they have appeared exactly alike. If my view be correct, that colour is a point of difference perceived by a perceptive centre in the brain, a method which aims at ascertaining the colour perception of an individual by measuring the apparent luminosity of the colours he perceives is as likely to achieve the desired result as it would be if applied to ascertain any other idea of the mind.

I will now give an example showing how inefficient these physical methods are to elucidate the phenomena of colour perception. I was the first to point out that intermediate between normal and dichromic colour vision there are those whose vision is pentachromic, tetrachromic, and trichromic. Let us consider those whom I have designated as having trichromic vision, because it has been asserted by so many physicists that normal colour vision is trichromic. A person whose colour vision is trichromic may see a spectrum of the same length as the normal-sighted, but he sees only three colours—red, green, and violet. He sees no orange, yellow, or blue in the spectrum. In fact, many have remarked to me that red-green would be a far better name than yellow and violet-green than blue, and they frequently used these terms. Yellow and orange do not appear to them as definite colours, but as transition colours between red and green. Tested in every possible way it is found that their vision is trichromic; they never mistake red and green for each other and laugh at the possibility of making this mistake, but are always in difficulty over orange, yellow, and blue. In a classification of colours the same mistakes are made: some yellows are put with red, others with green; some blues are put with violet, others with green. Yet examined by physical methods these persons may appear normal-sighted, and I may mention that several colour-blind persons of this class have been passed by a physicist as normal-sighted. It is obvious that a method of colour-matching which has for its theory that normal vision is trichromic will show that these persons are normal-sighted. They usually pass the Holmgren test with ease. They are, however, most dangerous persons at sea, as they are never certain about a yellow light and continually confuse it with red and green. When I was appointed by the Board of Trade to advise that body on the subject of colour-blindness one of the first cases that was referred to me was of this kind. The man could always distinguish between red and green, but was continually in doubt about yellow. It must be perfectly obvious to the reader that a man who cannot see any yellow in the spectrum and who thinks that red-green would be a better name for yellow cannot have normal colour vision. To me, the yellow of the spectrum or a yellow flower appears an absolutely distinct colour, in which it is not possible to distinguish either red or green. Blue and orange are also absolutely distinct colours to me.

I will now give a bare outline of my views on the perception of colour[1] as it will make the points which I wish to discuss more intelligible. I believe that light acting upon the retina liberates the visual purple from the rods and a photograph is formed, the cones and optic nerve-fibres conveying the impression to the brain. Kühne stated that the visual purple cannot be essential to vision as it is absent from the cones and only cones are to be found in the fovea centralis, the region of most distinct vision. This fact, however, furnished me with a ready means of testing the truth of my theory. I have made numerous experiments which prove that unless light falls as well on a portion of the retina containing rods it may fall on the fovea centralis without producing any sensation. The reader may convince himself of this by a very simple experiment. Fasten a piece of black velvet about three feet square on a door, and in the centre of the velvet put a pin so that the head is directed towards the observer. If the source of light be behind the observer the pin will be brightly illuminated, but on looking at it and keeping the eyes quite still the pin will disappear, the visual substance diffused into the fovea centralis being used up and not renewed. When viewed by indirect vision it is impossible to make it disappear in this way. Single isolated stars when not too bright may be made to disappear in a similar manner. In a dim light and with one eye shut a large portion, and sometimes the whole, of the field of vision will become totally black from the centre outwards. In this experiment the whole of the visual substance is used up and not re-secreted. It is easy to suppose that the visual substance becomes liquefied and diffused into the fovea centralis. This theory is supported by some hundreds of experiments, for instance that the area of greatest luminosity of the retina is at the point where the rods are most abundant, &c. This view occurred to me when I had not one-twentieth part of the evidence in favour of it which I have now. But during the last 10 years I have collected evidence that proves not only that there is a visual substance but that that substance is purple—namely, the complementary of pure green. It is probably only seen as purple when in excess. Under certain conditions a purple after-image can be obtained after white light and every spectral colour. If we rub one of our eyes in a dark room a purple light appears. It will be noticed that the visual purple is in every way suitable for the visual substance. It gives a continuous spectrum. It is easy to suppose that light might liberate the visual substance just as heat melts an ointment, but we have evidence that the cones themselves help. Engelmann and Van Genderen Stort have shown that there is a shortening of the inner segments of the cones under light, but this cannot convey any light sensation, as the same action has been found to take place when the light falls on another part of the body. This action would cause a vacuum. In my experiments, in which I have caused lights to apparently disappear, I find that the experiment succeeds best if only one eye be used and the greatest care be taken that no light falls on the face or any other part of the body. I believe that shortening of the spectrum is due to some defect in this visual substance as there is light as well as colour loss, which is not the case with colour-blindness due to defective psycho-physical perception. The visual substance being decomposed by light sets up by chemical, mechanical, electrical, or some other physical action, impulses which are conveyed to the brain through the cones and optic nerve-fibres, the cones being the terminations of the perceptive fibres in the retina. The whole impression being brought to the centre of memory, different portions of the impression—colour, form, size, luminosity, &c.—are conveyed to the mind through definite perceptive centres. In the case of colour, this perceptive centre is only able to distinguish six definite points of difference (colours) in the spectrum which really presents millions. We, therefore, for the normal-sighted have a hexachromic theory of colour-vision which is independent of light and shade. A hexachromic theory will obviously explain all that can be explained by a trichromic theory. It also agrees with the fact that both blue and violet have been demonstrated to be primary. I may say that I totally disagree with the theory that normal colour vision is trichromic, and am of opinion that the curves and equations which have been constructed to prove that vision is trichromic are mathematically incorrect. I have raised this point as an objection to the Young-Helmholtz theory in a paper recently read before the Royal Society. Equal stimulation of the three sets of fibres is supposed to cause the sensation of white light. Red and green when mixed make yellow. Violet and green when mixed make blue. But yellow and blue when mixed make white, which makes one portion of green too many, thus:—R + G = Y, and G + V = B, but Y + B = white, therefore, R + G + G + V should equal white, but R + G + V = white.

The degrees and varieties of colour-blindness are perfectly explained by the theory of psycho-physical perception. Assuming that the perceptive centre is smaller fewer points of difference are seen. The phenomena of contrasts are explained on the view that colour being a point of difference this becomes more marked on comparison. If we contrast a yellow with a greenish-yellow the yellow inclines to orange

[1] Colour Blindness and Colour Perception, International Scientific Series.

and the greenish-yellow to yellow-green. This could not be explained by assuming that the colours differ by the addition of the complementary to each, as the complementary of yellow is blue and this mixed with yellow would make white instead of orange-yellow.

In addition to the points which I have already raised the following appear to me as serious objections against the ordinary physical methods of ascertaining the colour perception of an individual.

Absorption of light by the media of the eye.—It is obvious that the media of the eye vary slightly in colour in different persons. This produces a variation of the colour curve in each case without in any way affecting the real colour perception of an individual. For instance, a normal-sighted person's vision is still hexachromic when he looks through a pale yellow glass.

Hyperæsthesia to certain colours.—Another source of error in matching colours with white light is that persons differ as to their sensibility to all colours or to certain of them just as they differ in their physiological actions in other parts of the body. One person can read in a very feeble light but is dazzled by a light which to another person is quite comfortable. A person of this kind matches a red with a grey which is much darker than that chosen by another person, though both may have equally good colour perception. Again, men vary as to their sensibility to certain colours; one is more affected by red, another by green, and another by yellow. We can also have temporary hyperæsthesia, an exaggerated example of which is found in photophobia.

Idea as to comparative luminosity.—In matching colours with white light or with each other much depends upon the observer's idea of the colour. If I make a match of red and grey with the idea that red is a very bright colour I shall make a match with a much lighter grey than I should if I had the idea that red was a very dark colour.

If the theory as to a photo-chemical substance be admitted then the action of light on the substance may produce an excessive reaction with one person and very little with another; the apparent luminosity would be much greater in the first case. The secretion of fresh photo-chemical substance may be quicker in one person than in another. We know that the visual purple may be bleached by monochromatic as well as by mixed light. If we suppose the visual substance of the eye to be decomposed in the same manner it would be possible to understand that we might get similar curves of luminosity by different colours though the visual impulses sent to the brain might in each case be different. If there be, and all recent research points to the fact that there are, different centres in the brain for the perception of luminosity and colour, it is obvious that ascertaining the luminosity of a colour will not give us any information concerning that colour because the two are absolutely and totally distinct. In order to make my meaning clearer I will make a comparison with the organ of hearing. The perception of pitch is in every respect analogous to the perception of colour and yet no one would dream of endeavouring to obtain any information concerning the pitch of a note by observations on the intensity with which it is struck.

In conclusion, I will point out that we must always be careful in examining a person by physical methods that we do not obtain results which are only physical, chemical, and electrical phenomena. When the phenomena are psychical they can not be measured by the balance and the rule but must be gained by direct evidence from the mind itself.

Hendon.

SOME REMARKS UPON THE TECHNIQUE OF OPERATIONS DESIGNED TO CURE RADICALLY OBLIQUE INGUINAL HERNIA.

BY FREDERICK D. BIRD, M.S.,
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THE introduction of Bassini's method of operating for the radical cure of inguinal hernia, whatever opinion we may have of its efficiency, undoubtedly gave a great impetus to the study of the subject. Several modifications in the direction of further elaboration soon appeared, and some of these—notably, the diminishing of the size of the spermatic cord by removal of an excess of veins—are of undoubted utility in certain cases. Whilst a strong adherent of Bassini's procedure, it has always struck me as unsurgical to follow all its details in every case. Our object in attempting a radical cure of hernia is to attain a certain security and not to perform any particular method of operating, no matter how good that may be. We desire to obtain future immunity against hernial protrusion by means as simple as possible, by means which damage and disturb the tissues as little as possible, and by means which leave the part as nearly as possible in the condition which obtains when there is no hernia.

The operation for radical cure of an inguinal hernia must be looked upon as essentially an abdominal incision. The main principles which guide and restrain our technique in opening the abdomen must be allowed full weight in our hernial operations. Thus the smallest incision which allows our free working is the best; a good inch or more of the skin incision, generally made on towards the pubes, is, as a rule, unnecessary. I often find now that it is not requisite to incise the skin internally as far even as the external ring. The tissue in this region carries a good deal of fat, much more than further out, and it is easily split into planes, which fact allows of ready infiltration of blood, and as it is furnished with one or two fair-sized arteries and two or more fair-sized veins the leaving of it intact is a matter of some importance in the saving of time and keeping the operation area dry from blood. If the incision through the skin and subcutaneous tissue is made well above the level of Poupart's ligament a region is entered which allows of marked mobility, so that if the operator wants it he can lift the skin and subcutaneous fat with the vessels in one piece on the forefinger and thus expose the external ring. On the other hand, I extend the skin incision well beyond the site of the internal ring.

From an incisional point of view Poupart's ligament in the operation partakes largely of the nature of a bony margin, therefore the further away from it we can keep the better for the future integrity of our scar. Thus the best skin incision, in my opinion, is one which is a full inch above Poupart's ligament and which does not invade more than slightly the pubic thickening of subcutaneous fat and which ends internally, of course, far from the commencement of the scrotum. Our objective, no matter how large the hernia, is, in the operation for the radical cure, as in the operation for the relief of strangulation, the point of exit of the hernia from the abdomen, and this in inguinal hernia is, in the vast majority of cases, the internal ring. Again a well-healed scar on the abdomen is of no moment, whilst the scar intruding on the flexure of the groin may be inconvenient. The deep layer of the superficial fascia next claims our attention. In recent hernia, and especially in the congenital variety, except in so far as it to some extent guarantees the blood-supply of the aponeurosis beneath, this structure is of small importance in the surgeon's eye, but in herniæ of years' standing, and particularly in the herniæ of old men, it becomes a tissue of considerable strength and definite utility in helping to make the best of a bad job. There is no occasion in a young hernia to strip it from the aponeurosis as far down as the ligament; its incision in the same line as the division of the aponeurosis with which it has vascular connexions is sufficient. In older and large herniæ where it has attained greater strength and substance it may be incised nearer Poupart's ligament than is the aponeurosis and by judicious trimming may be used as an accessory layer of moderate but undoubted restraining power and this in cases where the more definitely fibrous structures in great degree fail the surgeon. In old cases all the other fibrous coverings and structures lose in tone and texture whilst this deep layer of the superficial fascia alone gains in strength and importance.

It is, however, often necessary to dissect up a little of this deep layer in order to choose a line in the aponeurosis of the external oblique which seems to invite separation. The aponeurosis should be separated or divided half an inch at least above Poupart's ligament—i.e., away from what is more or less a fixed margin. This leaves a good fringe of fibrous tissue attached to Poupart's ligament which enables the deep sutures to be more easily inserted into that ligament and removes them from the immediate line of the superficial stitches in the aponeurosis. It must be wrong to cut fibrous structures if we can possibly avoid it and a small linear hiatus in the spread-out aponeurosis can generally be found which lends itself to the exposure of the underlying muscle

with a minimum of actual cutting of aponeurotic fibres. The grain of the flat tendon of the external oblique ring generally travels in the direction in which we wish to divide it, so that even if a hiatus is not present the linear fibres can be separated with care in such a way as to produce very little real damage. I say very generally because whilst this obtains in young herniæ the line of the fibres is in old herniæ often curved by the bulging and not in consonance with our line of incision. This is one of many reasons why our attempts at radical cure in old herniæ are not comparable with our results in recent ruptures. In addition to this the lower fibres of the external oblique aponeurosis are more curved in some young cases than in others presumably with the less or greater obliquity of Poupart's ligaments, which is, after all, only their thickened and reinforced edge. Thus it is in a few young cases necessary to cut across fibrous tissue in exposing the internal oblique quite apart from those discrete transverse or intercolumnar fibres or bundles of fibres which may be met with far away from the pillars of the ring. We cannot but divide these cross fibres when we meet with them running more or less at right angles to the line of our incision or separation, but can we save the most important of them all, the external ring itself? If we divide the ring no suture, however deft, will make it nearly so strong as before. We divide fibres the integrity of which we can never replace. Up to this point we have been as careful of the parietes as we are in the operation of the removal of the appendix, and the structures to be dealt with, even the occasional cross fibres, are the same, but the ring introduces a new element altogether. It can, however, be ignored in two ways, each of which may be used in a certain number of cases. The division of the aponeurosis can be taken outward an inch or two inches or more beyond the internal ring. This does hardly any damage to the wall (as we follow up the hiatus or fissure and the cross fibres are fewer the further out we go) and it gives us much more room to manipulate the cord, so much so as to enable us to free the sac, even when scrotal, without division of the ring. So desirable a conservation is not to be attained in every case, but it may be in a very considerable number of cases. It is easily accomplished in large old herniæ, in which it is of great value. Even in cases of old men where the testicle is sacrificed in the hopes of patching up the abdominal wall sufficiently to make their lives endurable the ring is a valuable collection of fibres in a region where all the fibrous structures have given and sagged. In young subjects where all the tendinous material is tauter we may occasionally have to divide the ring to give us room to carry out our manipulations in the canal, but it is a sorry spectacle in a plastic operation to see fibres of such consequence divided and the awkward flap which results.

In strangulated cases it is now my practice, unless the patient's condition is very bad, to open up the canal at once after incising the skin in the position described for the radical cure. Our objective is the same in strangulated as in non-strangulated cases, so that there is no need for a different incision. When the field of our efforts—viz., the inguinal canal—is open by dividing or separating the aponeurosis, it does not matter how large the hernia below is, as everything can be pulled up into the opened canal immediately beneath the surgeon's eye and finger. By opening the canal in strangulated cases at once the surgeon is in complete command of everything which concerns the operation. The distended sac at once bulges into the division of the aponeurosis and can be easily opened, the contents in most cases can be gently disengaged and brought up from the lowest parts of the sac, the whole field washed from any fluid which ought not to go back into the abdomen and all without dividing the most important cross fibres of the part of the aponeurosis which we are dealing with—namely, the external ring. Before we divide the aponeurosis the ring is grossly stretched but directly the pressure of the aponeurosis and the sac is removed all tension on the ring is gone. Even when the external ring is the seat of constriction the bowel can be disengaged from it by working from above in the opened canal. Our division of the external oblique aponeurosis is in the direct line of its action, so that when the muscle acts the slit in the tendon is still more closely approximated, but if the ring has been divided the lower *point d'appui* of a number of muscular fibres (and these attached to the tendinous fibres nearest Poupart's ligament and therefore the most important in a hernial sense) is lost. The division in the line of action of the tendinous fibres even up to the muscular edge in no way interferes with the mechanics of the part, but the destruction of the ring throws out of restraining action a number of fibres and renders them divulsive. The care with which nature has reinforced and attached the margins of the ring shows us the light in which it may be regarded as an antagonist of intra-abdominal pressure. We also know that when our operation fails to be a radical cure the protrusion in most cases comes directly out of the abdomen in the vicinity of the damaged external ring. Thus an effort, I believe, should be made to spare the ring, a consummation I find much easier and more often accomplished now than when I first essayed it. In this my technique has been much helped by separating the external oblique aponeurotic fibres far out and by a recognition of the way of dealing with the cord and sac in the least disturbing and damaging way.

We may obviate the necessity of opening up the ring by taking our incision in the aponeurosis above it so that it is displaced downwards with what we may call the lower flap. In this, however, we cut through some valuable fibres lying across our path, which injury is to some extent remedied by the good raw surface left allowing of excellent apposition. Very satisfactory results have been got in the cases in which I have used this detail, but it is not to be thought of if we can do what is necessary by separating the aponeurotic fibres outwards for a considerable distance and sparing the ring. This is undoubtedly to my mind the ideal way of treating a hernial case and is strictly comparable with the ideal operation for gaining access to the appendix where only skin, a deep layer of superficial fascia, and peritoneum are incised. Having separated the long fissure in the aponeurosis the forefinger is passed inside the lower part and gently pushed along as low as Poupart's ligament. In some cases where the hernia has been in existence for some years and the other parts are becoming lax, the ilio-inguinal nerve may be pushed downwards by the finger rather than remain in contact with the cord. The internal oblique is now inspected critically, the assistant raising the upper edge of the external oblique, for upon its condition depends much of the further steps of the operation. The muscle dominates the situation entirely. Its variations are most remarkable. In the cases which lend themselves most perfectly to a radical cure—viz., those of adolescents and young adults with sacs which have been but little used—it is hard to see where a hernia can come down, so closely aggregated are the fibres arising from Poupart's ligament. In these cases we have to make a deep dive with the forefinger to get under the fibres arching over the cord and lift it into view. The internal oblique here, in fact, presents a complete muscular curtain continued and carried out of sight by the cremaster. In a less ideal case, yet one very adaptable, the curved fibres are seen arching across the cord with a very well-defined lower edge. From such as these cases descend in degree of eligibility till we find them where hardly any muscular fibres are arising from Poupart's ligament at all, where there is no lower edge demonstrable in the position where the arciform fibres should be and where the muscle present is definitely cremasteric. A case is thus eligible for radical cure in proportion to the abundance of muscular fibres arising from Poupart's ligament. A muscular curtain forms a live barrier to the intra-abdominal pressure while fibrous tissue is but mechanical. Nature has given us a happy combination of both. The mechanical always remains with some degree of tension, but the live barrier may have entirely disappeared, and in such a radical cure operation is but a patched up stop-gap proceeding at the best. On the other hand, where the living curtain is in good order and of decent size the surgeon can leave his patient with an abdominal wall almost without a blemish and practically as good as in an individual with no rupture or any tendency to it.

Having demonstrated the inner aspect of the external oblique aponeurosis (as far as it is in connexion with the canal area) by sweeping away the scanty areolar tissue with the forefinger the next step is to lift the cord partly out of its bed. It is unnecessary to separate the fibres of the cremaster or to open the infundibuliform fascia, and by so doing the nerve is in much danger of being divided. The left forefinger is dipped beneath the cord to the inner side of the centre of the canal and at the same time the edge of the arciform fibres is lifted gently upwards and outwards by a blunt hook in the hands of an assistant. Any cutting of the fibres of the internal oblique is, to my mind, a most mischievous proceeding, quite opposed to the principles which

should govern the operation of opening the abdominal wall. The forefinger pushed below the cord and then upwards thins and spreads this out so as to bring into view the denser tissues of the sac. It now shows in the same position as does the tense sac in a strangulated hernia. It is quite unnecessary, at this stage at all events, to push the finger right through; all that is wanted is sufficient pressure to enable the sac to be demonstrated and seized with forceps. The infundibuliform fascia can be torn through with two pairs of dissecting forceps and the sac gently eliminated without the cord (which has undergone a minimum of disturbance) having been entirely dislocated from its bed. This attacking of the sac above and behind is of importance. It guarantees the integrity of the nerves in front, it does not fray out the cremaster, and it enables veins to be lifted by dissecting forceps off the sac which is plainly shown and can be disengaged from the surrounding parts without damage to the veins. There is less inclination to strip the veins and other structures from the sac instead of loosening the sac from them. With the acquired sac and with a funicular sac which has closed somewhere in the canal the sac may be picked up anywhere by the manœuvre just described, though of course the lower margin of it is the easiest to pick up, but when dealing with a congenital sac—namely, a sac extending to the testicle (the curved lower extremity will, of course, not be seen) by far the readiest and best way of eliminating the sac from the cord is to begin high up near the deep epigastric artery. There the serous membrane is not so intimately associated with the cord and the vas deferens will allow the sac to be much more easily dissociated from it than lower down. If it is attempted to separate the congenital sac low down in the canal the surgeon will generally find himself after a time with shreds and streamers of serous membrane instead of the tube of sac which he will preserve if the elimination is started up above as near the point of divergence of the constituents of the cord as possible. In any case the sac must be cleared up to the level of the artery. A small pad of fat is very generally met with (even when there is but little in the cord lower down) just below the level of the epigastric artery. It runs up between the artery and the sac and may be continuous with the fatty covering of the bladder. It has a peculiar consistence and is, I believe, as a rule not at all closely attached to the sac. I have come to look for it in every case. It should be inspected carefully, as there are always possibilities of the bladder itself being in close juxtaposition. I like to see or feel the deep epigastric artery, but this aforesaid pad of fat is a very good landmark when it is small and quite differentiated from any fat in the cord. Some traction is made upon the sac when its elimination from the cord is completed, the pad of fat is gently disengaged, and the sac is tied with catgut just below the point where it is becoming parietal peritoneum. When the sac is thin and of little volume, the internal ring small and in proper position, and the muscular curtain of internal oblique sufficient the ligature need only encircle the small calibre of the sac and not transfix it. The part to be removed is cut short and with the release of tension the butt-end retreats rapidly behind the deep epigastric and disappears under cover of the muscular wall. This elasticity shown by the peritoneum is always encouraging, as it ensures that the previous point of exit of the hernia is well out of the way of the internal ring and that it has in front of it the vital force of the muscular curtain and not fresh scar tissue induced by the operation. Any small puckering, any slight inclination to pouching, does not matter if the pucker is supported by a sufficiency of muscle which when acting shuts down on the only possible place where pouching can become actually hernial. When a satisfactory muscular curtain exists deep Bassini sutures must be not only unnecessary but actually harmful, throwing the muscle in action out of gear and preventing it from forming an evenly-resisting barrier to the internal pressure. Thus in cases where the anatomical conditions lend themselves to a radical cure the surgeon may perform an operation which, while destroying no structures in the attainment of its end, removes that which is useless and harmful and leaves the part in the normal condition without any artificial additions.

In this operation, which can often be performed in adolescents and young adults, the skin is cut, which is harmless, and the sac is removed, which is needful. Nothing else is interfered with more than very slightly and temporarily. The points which I would urge are the skin incision well above Poupart's ligament and well away from the pubes, the separation of the fibres of the external oblique aponeurosis at a suitable spot, the separation being carried well towards the muscular portion, the sparing of the external ring, the dislocation but partial of the cord from its bed, and the elimination of the sac from above and therefore the preservation of the nerves, the whole to be accomplished with little or no bleeding—an advantage to be attained with great gentleness and the use of dissecting forceps. Apart from the unworkmanlike appearance of a sloppy operation area, bleeding much inconveniences the surgeon and damages the tissues. It obscures the view, necessitates constant sponging, and irritates the delicate areolar planes, which become more or less loaded with blood not capable of being removed. The serous exudation is much greater and the tissues are much weaker and sodden. In addition to these immediate disadvantages there is the grave though unlikely occurrence of thrombosis in the veins of the cord with its possibilities of pneumonia and other distant disasters. The absence of the deep sutures is a gain in two directions: the unimpeded muscle acts as nature meant it to, and there is no foreign body at all in the depths of the wound, no silk with tension on it, and no over-chemicalised catgut.

Unfortunately not all herniæ are susceptible of these innocent measures, but those which are, and they are an increasing number since subjects present themselves so early in life now, allow the surgeon to consummate an operation which in its aim, in its method, and in its results is practically perfect.

Melbourne, Victoria.

IMPERIAL BRITISH PHARMACOPŒIA: NOTES ON SOME INDIAN DRUGS.[1]

BY WILLIAM MAIR, F.C.S.

IN response to an invitation from the distinguished President of the British Pharmaceutical Conference to indicate which of the more important unofficial drugs indigenous to British India and in actual use by native and European physicians would be likely to present features of practical interest and utility to pharmacists in this country and to pharmacists generally the following brief details are submitted. I should add that my experience is limited to Calcutta, which may be taken to be fairly representative of the Bengal Presidency, and the drugs which I propose to deal with are well known throughout India. The promised early publication by the General Medical Council of an Indian and Colonial Addendum to the British Pharmacopœia of 1898 (which is expected to be authorised for issue by the end of the present year) and the consequent completion of Professor Attfield's worthy ideal of the expansion of that volume into an Imperial British Pharmacopœia suggest the desirability for some acquaintance with such of its probable contents as may be useful to pharmacists outside those portions of the empire for the special use of which products and preparations are to be officially recognised. Of the 40 or 50 medicinal substances and the practically corresponding number of pharmaceutical preparations the greater part (about 30) represents those requested by India and incorporated in Professor Attfield's Draft Addendum, now proceeding to a final draft through the hands of influential experts in India.

The question that has presented itself to some practical pharmacists is whether any or all of these drugs are likely to come into use in medicine in this country and which are likely to be worthy of attention that have been proved to be good for specific purposes in the land of their origin. It is not unnatural to expect that the great British dependancy which has given us nux vomica, cannabis indica, sandal wood, and kino and chiretta should still possess the secret of others of equal individuality. Whether that is so or not, whether there are lurking in the bazaars drugs of subtle action or potent virtue calling for a wider sphere of influence, it may not be for me to express an opinion. There are drugs in everyday use in the districts, as distinguished from the Presidency cities, the names of which even are not known to Europeans, but it is hardly possible that any of

[1] A paper read before the British Pharmaceutical Conference on July 25th, 1900.

equal value to those which I have indicated or any drug of therapeutic interest not already represented in the Pharmacopœia could have escaped the notice of observers and investigators.

To proceed to the analysis of the 30 medicinal products of India likely to be included in the forthcoming Addendum as a selection bearing the stamp of official approval there fall to be eliminated those that are intended for use in India only as local substitutes for, and alternatives of, the official imported products. It does not directly concern us how far calumba could be replaced by coscinium, its former arch adulterant; whether the wood of samadera would equal that of quassia, unless the latter were becoming scarce and dear; how far the root bark of toddalia may represent casparia or cissampelos would pareira; to what extent the leaves of datura alba are equivalent to those of belladonna in terms of the relationship of daturine to atropine and hyoscyamine; whether also cotton-root bark will make an infallible substitute for ergot; or whether the telini fly will not yield more cantharidin than the true cantharides, or the very doubtful tylophora leaves or the root bark of calotropis (mudar), both advocated for many years but never used, supersede the indispensable ipecacuanha which, unhappily, has not yet been successfully cultivated on a commercial scale in India. Few of these alternatives are likely to acquire much significance to pharmacists outside of India or to importers. Butea gum may come to be recognised in this country as in some measure, though very imperfectly, representing the official kind, in which case the question presents itself whether the use of the Addendum may not be reciprocal and whether those country medicines to be recognised for use in India instead of the imported drug may not be officialised for use in this country in time of scarcity. There are others, however, of more strictly commercial importance which would be better considered from that point of view, but for which recognition is desirable for the adjustment of official standards. These are gummi indicum (dhaura gum), when clean and good quite equal to gum acacia; the oil of gingeli seed (sesame oil), exported from India in oil and seed to the value of nearly £1,000,000 sterling per annum, approximating to olive oil; and oleum arachidis (nut oil), proposed to be "employed in Indian pharmacy whenever olive oil is ordered in official preparations," to quote the words of the Draft Addendum. Wherein the question of reciprocity would again arise. It is fortunate that many important points of chemical, physiological, and therapeutical detail in reference to these articles will now be finally settled by the committees entrusted with their pharmacological investigation, but it has to be said that some of the alternatives proposed which have most probably, however, been subsequently reconsidered are not known in actual use, and it is difficult to understand why, for instance, crinum bulbs should have been recommended for use instead of squill, while no mention has been made, so far, in any of the published reports of the bulbs of either urginea indica or of ledebouria hyacinthoides, the squill of the bazaars, largely and regularly used in Government dispensary practice. I omit also from consideration at this time betel leaves and jasmine flowers, both used in the fresh state for purely domestic purposes.

The following may be found to be worthy of a more definite place in medicine in this country; some are old friends seeking re-introduction. They would repay attention and trial in the conditions indicated. I ought to state here that it was my intention to have accompanied this paper with formulæ and processes for the preparation of each drug which I would consider most suitable. It has not been found possible, however, to complete the long series of experiments necessary to arrive at reliable data. The details of these processes will appear in full, however, in this paper as published in the Year Book of Pharmacy.

Andrographis paniculata (the kreat, the dried herb; shown).—Perhaps this is the most worthy of recognition of the many simple bitters of India, in addition to chiretta, not as a substitute for it. One of its vernacular names implies "king of bitters." It contains a neutral non-alkaloidal bitter principle as yet unnamed and has febrifuge properties which chiretta does not possess. For that reason it is appreciated in India and is frequently prescribed in convalescence after fevers; it has been employed successfully in influenza. Fluid extract. (A formula will appear in the extended paper as published in the Year Book.)

Belæ fructus.—Although tried in this country and found wanting the sacred bael is, as it has always been, the most trusted of Indian indigenous medicines. It is constantly prescribed by European physicians and is of unquestionable value in diarrhœa, avoiding, especially in children, the constipation attending the use of astringents. An aqueous fluid extract from the pulp of the fresh half-ripe fruit, instead of that "imported in dried slices" will redeem its character. Another preparation in great favour in India is a confection of bael, sometimes aromatised, a valuable dietetic in teaspoonful doses in chronic diarrhœa, made from the pulp of the fresh just ripe fruit freed from the seeds by passing through a coarse sieve and preserved with sugar. For the extract the fruits, freshly imported whole, would require to be used; the confection would be best prepared on the spot and imported after the manner of tamarinds and chutnies.

Ispaghula (seeds of Plantago ovata; shown).—These minute boat-shaped seeds are imported from Persia. They contain no medicinal principle whatever but are peculiarly successful as a remedy in diarrhœa and dysentery and as an intestinal emollient in gastric catarrh. The simplicity of their action is such that no preparation can be suggested. One drachm of the cleaned seeds is infused for 20 minutes in five ounces of cold water, sweetened with sugar, and the resulting mucilaginous mass is swallowed unstrained. The action is purely mechanical, the abundant, bland, adherent mucilage allaying the intestinal irritation. They are employed in the manner indicated by distinguished officers of the Indian Medical Service.

While this paper is in no sense a criticism of the published material proposed for the Addendum, the limit of time for the presentation of comments and suggestions as invited by the editor (significant of a new era in Pharmacopœia-making) having passed, I cannot refrain from expressing the hope that some of the following may have been deemed equally worthy of recognition with the foregoing.

Holarrhena antidysenterica (kurchi, root-bark; shown).—This, perhaps, comes next to the bael in the estimation of European prescribers in India among indigenous medicines. The active principle is the alkaloid kurcheine and the properties are mildly astringent, anti-dysenteric, and febrifuge. Both a solid and liquid extract are used in India, the latter being the more desirable. (A formula and process will be presented in the Year Book.)

Garcinia Mangostana (mangosteen rind; shown; imported from Singapore).—This drug contains tannin, resin, and a yellow crystallisable principle, mangostin, and is used popularly like kino or catechu, but not much prescribed, in the form of a syrup made by boiling the rind in water and adding sugar to the strained decoction. A better process is to make the syrup from a fluid extract from 20 per cent. alcohol.

Carica Papaya.—The importance of the papaya fruit [shown] cannot be over-estimated, and it may be found to have been given a place in the ultimate Addendum for the sake of the well-known papain, as an alternative to pepsin, if only on the ground of caste prejudice. An elegant liquor papain which is made from the fresh milky juice and preserved with glycerine is also in vogue as a successful "vegetable pepsin." Its action is, of course, distinct from that of pepsin.

Eugenia Jambolana (jambul seeds; shown).—If this drug has not fulfilled all that was expected of it as a remedy in diabetes it remains to be disproved whether it is not of use in the treatment of diabetes. All that need be said is that it is used by the people and prescribed by distinguished native physicians. The secret may perhaps lie in making the aqueous liquid extract from fresh seeds from ripe fruit.

Gynocardia odorata (chaulmugra seeds; shown).—The value of the expressed oil in eczema, psoriasis, and allied skin affections is too well known to call for comment. It is regularly and largely prescribed for external use and in the style of a cream with equal parts of the oil, lanolin, and lime water.

Adhatoda vasica (leaves shown).—This drug is used in pulmonary affections and is regarded as an internal antiseptic in phthisis. It contains a white crystalline alkaloid-vasicine, sparingly soluble in water but soluble in alcohol. The drug is strongly alkaline, due to the presence of potassium chloride. The only preparation which I have seen prescribed is syrup vasak, which is best made from a liquid extract.

I have the honour to acknowledge my indebtedness to Professor Wyndham R. Dunstan, F.R.S., for authentic specimens from the Imperial Institute collection; to Mr. E. M. Holmes, F.L.S., for other specimens; and to my friend Mr. Frederick Bascombe, F.I.C., for undertaking and

carrying through the pharmaceutical work involved in the laboratories of Messrs. Fletcher, Fletcher, and Co., Limited, to whom also my thanks are due.

Edinburgh.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE ON THE SAFEST METHOD OF REMOVAL OF THE APPENDIX.

BY A. A. WARDEN, M.D. GLASG. AND PARIS,
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APPENDICITIS has become so frequent an alarm in daily practice and is so treacherous in its behaviour that surgeons would do well to be agreed upon the method to be followed when removal of the appendix is decided upon. There are at present three methods in use which I venture to term (1) the continental method; (2) the English method; and (3) Doyen's method, which is best because it is the simplest and safest, and which I call Doyen's because I believe Doyen to be the first surgeon who has described and used it.

1. The continental method—that commonly followed by Terrier, Hartman, and most Paris surgeons—is simply to ligature the inflamed and diseased appendix near its base, resect it with the thermo-cautery, cauterise the stump, and then let it fall back into the abdomen. This method must be admitted to be faulty because it leaves loose and open in the abdomen the cauterised lumen of the appendix which, even if effectively cleansed, is almost certain to adhere to neighbouring abdominal contents. If ineffectively cleansed pus and a peritoneal abscess (and perhaps generalised peritonitis) are inevitable.

2. The English method, associated with the names of several surgeons, is to dissect back a collarette of peritoneum which is finally stitched over the ligated stump of the appendix. This method is an improvement on the former one but is also faulty in being more difficult and in exposing the field of operation to a leakage of the bowel contents in the event of an accidental puncture or opening of the appendix. In the case of an inflamed and diseased appendix this accident is difficult to avoid if attempts are made to strip off the serous covering.

3. Doyen's method I consider to be the best because I see no valid objections to be urged against it. It is simple and rapid; the appendix is not opened, so there is no possibility of infection of the peritoneum by escape of bowel contents: and lastly, by invagination of the stump, in the event of further infection and suppuration the pus is bound to discharge into the lumen of the bowel and to be evacuated naturally per anum. I will describe the little operation briefly, step by step. The little mesentery of the appendix is first ligatured with a small silk ligature to free the appendix laterally. Then (1) the base of the appendix is gently crushed with Doyen's small clamp. Almost any forceps suffices for this purpose if strong enough and broad enough to completely occlude the appendix for a breadth of, say, a quarter of an inch; (2) a fine silk ligature is thrown round the base of the appendix in the furrow left by the clamp; (3) the appendix is then removed by the thermo-cautery cutting close to the ligature; (4) a purse suture is then made in the serous covering of the cæcum close round the base of the appendix (as this purse stitch is drawn tight the little stump is invaginated so that all is completely closed); and (5) for safety a second fine silk purse stitch is made and the little pucker of the first stitch is similarly invaginated and the ligature is gently tightened. The result technically is perfect and certainly this is the most aseptic method of removing the appendix.

Mr. C. B. Lockwood in a recent article[1] entitled "The Organisation of Aseptic Operations and Some of the Causes of Failure" refers to 10 cases of operation for appendicitis in which no pus was found and yet in which the abdominal wound suppurated in three cases with extrusion of some, if not all, of the sutures. He came to the conclusion that some of these failures were due to the nature of the operation and that, as a matter of fact, the wounds became infected during the removal of the appendix. Mr. Lockwood adds that he has histological evidence that even in non-suppurating cases the inflamed tissues round the diseased appendix are often infected with bacteria and that, therefore, it is not to be wondered at that, after appendix operations, buried silk sutures are apt to be extruded. "I have not abandoned hope," he says, "that we shall learn how to bury silk in the abdominal wall in appendix operations." I venture to express the belief that this hope would be more speedily realised by the general adoption of this aseptic method of removing the appendix.

Paris.

[1] Brit. Med. Jour., Feb. 24th, 1900.

NOTES OF TWO CASES OF PERNICIOUS ANÆMIA TREATED WITH HOMMEL'S HÆMATOGEN.

BY HERBERT MEGGITT, L.R.C.P., L.R.C.S. EDIN.

CASE 1.—A man, aged 35 years, came to me in February, 1899, complaining of giddiness, shortness of breath on exertion, and general languor. His skin was of the peculiar lemon tinge so often seen in these cases. The patient had not lost flesh and in fact he thought that he was stouter than formerly. Inquiry elicited the fact that he had had a family worry some time previously and that he had never felt the same man since. He had begun to feel weak and unable to exert himself and his friends at the same time began to notice his increasing pallor. The urine was high-coloured but free from albumin. The ordinary causes of anæmia were carefully eliminated and the case was diagnosed as one of pernicious anæmia. An examination of the blood resulted in the discovery that its specific gravity was reduced 1040. The corpuscles did not adhere in rouleaux and their number was greatly reduced, but what was most noticeable was their great variation in form and size; nucleated red corpuscles were also present. Arsenic in gradually increasing doses, in the form of Fowler's solution, was given and continued for some time, but with absolutely no good effect. At the commencement of this treatment the patient was kept in bed. The diet ordered was chiefly farinaceous. Iron was then administered, but with like results. The patient was evidently getting weaker. Happening to mention the case to a friend he advised me to try Hommel's hæmatogen. It was given daily with the best results for four and a half months. A further examination of the blood showed that the corpuscles were assuming their natural shape and their number had increased, but the more tangible and satisfactory result was the condition of the patient who was able to resume his work with a freedom from all his previous symptoms.

CASE 2.—This case was interesting from the fact that the patient had been treated with salol after the failure of arsenic with marked improvement, but unfortunately with a relapse. The patient was a woman, aged 38 years, who complained of faintness, palpitation, loss of appetite, extreme debility, and constant vomiting. The pallor of the skin was striking. The mucous membranes were pale, there was œdema over the malleoli, and there were some petechial hæmorrhages on the lower limbs. It happened that the patient when residing elsewhere had been under treatment for the same condition and she thought that she had been cured, but after a period of four months the old symptoms returned. Correspondence with her previous medical man revealed the fact that she had been treated with arsenic and later with salol with apparent benefit. I therefore determined to commence the treatment with the administration of Hommel's hæmatogen. This was continued on and off for a period of six months, during which time repeated examination of the blood was made, marked improvement being noted.

Tottenham, N.

A CASE OF SUDDEN DEATH SHORTLY AFTER OPERATION.

BY W. BOLTON TOMSON, M.D. DURH.

A SOMEWHAT delicate overgrown child, aged 12 years, was operated on for adenoids and enlarged tonsils at the Children's Hospital, Luton, on July 7th, at 3.20 P.M. Chloroform was administered through a Krohne's inhaler to start with, and later from the ordinary flannel facepiece.

The child was very nervous, and from the first did not breathe well, the colour and pulse, however, still keeping good. Chloroform was therefore purposely not pushed to complete anæsthesia, but the gag was introduced when voluntary movements ceased, there being still a slight corneal reflex. The tonsils were first removed, but as there was considerable struggling the head was drawn well over the edge of the bed, and a little more of the anæsthetic was given. The adenoids were then removed in the usual manner, the operation being followed by, if anything, less bleeding than usual. The child was at this time breathing well, and had to be held down, having partly recovered from the anæsthetic but not yet being conscious. Shortly afterwards the colour suddenly changed, the respiratory movements became feeble and the pupils dilated, and the pulse grew very weak. Artificial respiration was immediately commenced by the Silvester method, the tongue was caught in tongue forceps and drawn well forward, injections of ether and strychnia were given, and hot-water bottles were applied between the thighs and to the soles. At first there was slight improvement, but spontaneous breathing never completely returned, though faint respiratory movement was perceptible for nearly three-quarters of an hour. The heart sounds grew fainter and fainter and finally ceased. Rhythmic traction on the tongue had meanwhile been steadily practised (as advocated by Laborde) and as a last resort, to obviate any possibility of laryngeal obstruction, tracheotomy was hurriedly performed. There was, however, no attempt at rallying and the heart sounds and breathing having ceased for some time artificial respiration was abandoned after about one and a half hours.

The immediate cause of death is not easy to state. As far as the anæsthetic was concerned it was Messrs. Duncan and Flockhart's best, and a remarkably small dose was given, only one and a half drachms (measured). Anæsthesia was, moreover, at no time complete. Further, after the operation had been concluded and the administration of the anæsthetic had ceased for some minutes, there was partial recovery, as evidenced by the struggling. The heart was carefully auscultated before the operation and no abnormality was detected. Of obstruction to the respiratory passages, such as might have been caused by spasm of the glottis, or accidental sucking in of blood there was at no time any evidence. Air entered and left the chest during artificial respiration with an audible noise, and there was no stridor. There was no intense cyanosis or venous engorgement, such as one might expect were asphyxia the cause of death, but only a lividity of the face and blueness of the eyelids, which varied with the success of the artificial respiration. There was no vomiting during the operation or subsequently. Under these circumstances, therefore, it seems to me to be probable that death was due to gradual cardiac paralysis.

Luton.

DEATH OF A CENTENARIAN.—The death occurred recently at Lapford, Devonshire, of Mildred Jerrett, who, according to the register at the parish church, was baptized in February, 1800.

THE LEAGUE OF MERCY: PRESENTATION OF THE ORDER OF MERCY.—Their Royal Highnesses the Prince and Princess of Wales, as Grand President and Lady Grand President of the League of Mercy, entertained the presidents and vice-presidents of the league at Marlborough House on July 27th. The guests assembled in the garden and on the arrival of the Prince and Princess were presented to their Royal Highnesses. During the course of the afternoon the Prince and Princess of Wales in accordance with the statutes of the league presented the Order of Mercy for services to the league, and also for services in connexion with the London hospitals, to the following: Sir Whittaker and Lady Ellis, Mr. E. A. Hambro, and Mrs. Herbert Allingham.

UNIVERSITY COLLEGE, BRISTOL.—A further addition has just been made to the structure of University College, Bristol. The new building, which closely adjoins the medical school, has been erected at a cost of about £6000. It contains on the ground floor a library about 46 feet square, also several class-rooms and preparation rooms for biological work. On the upper floor is an examination hall 88 feet long by 46 feet high and a gallery has been arranged at one end. The building is approached by an entrance in the front and lavatories and cloakrooms have been provided.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SALISBURY INFIRMARY.

A CASE OF CEREBELLAR TUMOUR IN WHICH THE RESPIRATION WAS ENTIRELY SUSPENDED FOR FOUR HOURS BEFORE CESSATION OF THE CIRCULATION.

(Under the care of Dr. E. T. FISON and Mr. L. S. LUCKHAM.)

A YOUTH, aged 16 years, was admitted into the Salisbury Infirmary on Feb. 3rd, 1900. He complained of great pain in the head, back, and heart, and of vomiting. He had been in bed for the past three weeks, and had been sick after all solid food. His sister stated that during the paroxysms of pain he became quite rigid, but that he was not convulsed. For some time previously to this he had suffered from constipation and headache. The appearance of the patient was dull and apathetic, and he was of a dusky leaden hue, and looked markedly the subject of cerebral disease; at times he appeared to be in pain, when he called out and complained of his head. The tongue was thickly coated. The temperature was only 97° F. and remained subnormal throughout, the respirations were 16, and the pulse was 70. His attitude was one of general flexion and he kept in a lateral position; the head was much retracted and on extension of the neck he called out with pain. He was very irritable and objected to be roused, and at times feigned to be asleep. There was no strabismus, but the mouth was drawn up slightly to the right as though the left buccinator was a little paralysed. The tongue was protruded straight. The abdomen was retracted. The hand-grasps were equal and there was no paralysis of any other muscle; the knee-jerks were at times present and at others were absent. Kernig's sign was absent. Sensation was normal. The bowels were obstinately constipated. The urine contained no albumin or sugar. There was nothing abnormal seen in either ear. The ophthalmoscope showed marked papillitis with considerable swelling, estimated to be about 4 D. There were also some hæmorrhages. The left optic disc seemed more inflamed than the right. The vision was $\frac{6}{9}$ in both eyes. There was nothing distinctive about his gait as he was so weak that he could hardly stand alone.

For a few days after admission he kept his back arched and at times he had pleurosthotonos with the concavity to the left, but his general position was on the right side. He was only occasionally sick. He often called out with the pain in his head, but it was more of a moan than the piercing cry of meningitis. He generally located the seat of the pain to the left side of the back of the head. On Feb. 8th he had an attack of rigidity of the limbs and trunk lasting for three or four minutes. At times he was more drowsy than at others and the facial paralysis varied also considerably, sometimes being absent. On the 12th a consultation of the staff was held and the general opinion expressed was that the patient had a cerebellar tumour, and Dr. Fison ventured to locate it in the left lobe of the cerebellum and thought that it was probably a tuberculous tumour. An operation was decided upon, but before it was done it was decided to increase the iodide of potassium to 15 grains, it having previously been given in smaller doses. This delay was unfortunate, as instead of improving the patient steadily got worse. The pain increased, he lost control of the sphincter vesicæ and the sphincter ani, and an operation was definitely decided upon for Feb. 22nd.

At 9.30 A.M. on that date chloroform was given by the open method. There was no corneal reflex, the pupils were contracted, and he appeared to be semi-conscious before the administration of the anæsthetic was commenced. At 9.50 A.M., Mr. Luckham operating, a crescentic skin incision was made behind the ear, having for its centre a point one and a half inches behind the centre of the external auditory meatus and a quarter of an inch below, when the patient was noticed

be turning very livid. About one and a half drachms of chloroform had been used, but the anæsthetic had been discontinued for some minutes previously. As the lividity was increasing the tongue was drawn out and artificial respiration was begun, and during the next four hours till his death at 1.40 P.M. he was kept alive by artificial respiration, on cessation of which he at once became livid again and the pulse became imperceptible. During the whole period the pulse varied considerably, at times being imperceptible, at others 80 per minute and of good volume, and at others 140; of true respiratory action there was none, the only approach to it being an occasional reflex action of the pharyngeal muscles. The battery was applied to the præcordium and to the phrenics and diaphragm. Strychnine and brandy were injected and the external jugular vein was opened.

Necropsy.—At the post-mortem examination on the next day, on taking off the skull-cap there was found to be great tension of the dura mater; on removal of the brain a large amount of cerebro-spinal fluid was seen at the base of the brain, at least five ounces together with what was in the ventricles. In the left lobe and at the edge of the cerebellum a hard mass was felt. This mass on section was of about the size of a penny, fairly circular, firm to the knife, and yellowish-grey in appearance; around the tumour there was a fibrous capsule, and exterior to this there was a ring of red softening, so much so that it was possible easily to lift the growth from its bed. It was not made out definitely that it pressed upon the seventh nerve, but doubtless it could have done so in that position. The lateral ventricles were very much dilated and the foramen of Monro was large and the veins of the choroid plexuses were much engorged. In the chest there were many old adhesions of the pleura, especially on the left side. Nothing else abnormal was found in the body but a few large mesenteric glands. Dr. C. Slater of St. George's Hospital kindly examined the growth microscopically, and reported: "I think the tumour is undoubtedly tubercular, and I have found bacilli unmistakeable but very scanty—one or two per section."

Remarks by Dr. FISON.—The diagnosis of the above case presented no marked difficulties if the signs and symptoms could be definitely relied upon. The first question arose, Was it meningitis or tumour? This seemed to be easily answered, as the case had been of too long duration for a tuberculous meningitis; still, there are rare cases of chronic hydrocephalus which come on as a result of posterior meningitis and which present the same signs as tumour. Passing to the more difficult matter of its localisation the signs seemed to point to a tumour in the cerebellum; this was shown by the retraction of the head, the attacks of bilateral rigidity and persistent posterior pain, and also by the great swelling of the optic discs, cerebellar tumours causing more intense papillitis than tumours in the hemispheres. Having located it in the cerebellum, which of the three lobes was it in? There was no vertigo or reeling in walking which is associated with growths in the middle lobe, and the fact that the left facial nerve was involved seemed to point to the left lobe, this nerve presumably being involved in its course to the internal auditory meatus. Facial paralysis also is generally on the same side as the lesion in the case of tumour. It did not seem probable that the nucleus was involved, as it would be difficult then to understand that one cranial nerve should alone be involved. It would seem strange that the auditory nerve should be unaffected, but it is an observed fact that sensory nerves are capable of withstanding more pressure than motor (e.g., crutch palsy—paralysis in Pott's spinal disease). Besides this the boy complained constantly of pain in the left side of the back of his head. As to its nature this could only be surmised; there was no history or sign of syphilis, and no improvement took place under iodide of potassium. But considering that tuberculous masses form the bulk of cerebellar tumours in the young, it seemed probable that this was a tuberculous growth. Thus Allen Starr, out of 299 cases of tumour in patients under 19 years of age, found that 152 were tuberculous.

This mode of death in tumour of the brain receives but little notice in the text-books on medicine. Thus Byrom Bramwell in Allbutt's System of Medicine makes no mention of it; he says, however, that Cheyne-Stokes breathing occasionally occurs, particularly when the tumour is near the respiratory centre. Hilton Fagge says that death is often caused by cessation of the respiration, and in one instance the pulse went on for 35 minutes after the respiration had ceased. The other works on medicine which I have been able to consult make no mention of it at all. I know, however, of a case that occurred in the Hospital for Sick Children, Great Ormond-street, where respiration failed 30 hours before death ensued, artificial respiration being kept up for the period. I am told, also, that at the National Hospital for the Paralysed and Epileptic, Queen-square, this condition is by no means rare.

I have been able to come across only one paper in literature relating cases; this is by Sir Dyce Duckworth.[1] He reports four cases of cerebral disease in which the respiration ceased for some hours before the circulation. The first two cases were the subjects of abscess, one in the cerebellum and one in the temporo-sphenoidal lobe. Both were trephined, and in neither was the abscess opened; in neither did the trephining restore the respiration which ceased three and three-quarter hours and four and three-quarter hours respectively before the circulation. In the third case, one of abscess in the temporo-sphenoidal lobe, at midday artificial respiration had to be resorted to, and as the patient improved an anæsthetic was given and trephining was done; the abscess was found and opened and the respiration much improved, death, however, occurred at 6 P.M. on the same day. The fourth case of the series is one of hæmorrhage into the brain and ventricles of slow onset; trephining was done, and about half an ounce of blood was withdrawn from the right ventricle without any effect on the respiration. The heart ceased five hours after the respiration. Professor W. Macewen operated upon and opened a cerebellar abscess in a subject whilst artificial respiration was being performed. The respiration soon afterwards became voluntary. Nicoll[2] reports a case of supposed temporo-sphenoidal abscess in which during the preliminary stage of trephining the respiration ceased and artificial respiration had to be resorted to. It was determined, however, to open the skull; this was done and the patient began to breathe. A large malignant tumour was found growing from the petrous bone. The patient lived for two and half months afterwards. Every experimenter[3] upon this subject has proved that increase of intracranial pressure manifests itself more upon the respiratory centre. This centre appears to be more sensitive and vulnerable to pressure, but not so vital as the vaso-motor centre. Thus, by pressing upon a meningocele children can be put to sleep and the respiration is slowed. In animals, intracranial tension experimentally produced slows, and then abolishes, respiratory movement before the heart ceases action.

It seemed possible at first that the patient was suffering from chloroform poisoning. This, however, on second thoughts seemed to be unlikely, as, though in death from chloroform respiration at times ceases before the circulation, yet there is no great interval between the two events. Chloroform poisoning in its later stages produces a fall of the venous cerebral pressure, this being due to a general fall in the arterial pressure, and also due to inhibition of the vasomotor splanchnic mechanism, so that the patient bleeds to death into the veins of the splanchnic area.[4] In this case the arterial pressure kept good so long as artificial respiration was kept up. From the cases quoted above it would seem far more likely that relief to the respiratory centre will follow if the abscess be evacuated or the tumour removed, it not being sufficient to remove only a crown of bone. The explanation is that in greatly increased intracranial pressure the bulb blocks up the spinal canal and no cerebro-spinal fluid can be forced out by the atmospheric pressure into the subdural space in the cord. What one certainly has learnt is that even though the respiration ceases the operation ought to be continued at all hazards, for there is certainly a chance of voluntary respiration returning if the growth be removed. I certainly regret that this was not done in this case, especially as the growth was exactly situated under what would have been the trephine hole, and it would easily have been shelled out. Whether this condition is more common in connexion with tumours of the cerebellum than of the hemispheres I do not know. At any rate it seems likely that respiratory failure would occur in an earlier stage of the growth or abscess, for, shut off as it is by the tentorium cerebelli from the fore brain in a small space, the effects of pressure must exert themselves sooner than in the case of growth in the larger space occupied by the hemispheres.

[1] Edinburgh Medical Journal, New Series, 3, 1898.
[2] THE LANCET, Oct. 29th, 1898, p. 1114.
[3] Hill: Allbutt's System of Medicine, vol. vii., and Journal of Physiology, vol. xviii., Nos. 1, 2, and 4, and vol. xxi., Nos. 4 and 5.
[4] Ibid.

THE LANCET.

LONDON: SATURDAY, AUGUST 4, 1900.

WE publish in this issue three of the addresses delivered before the British Medical Association at Ipswich in plenary congress—namely, the Presidential Address of Dr. ELLISTON, Dr. PYE-SMITH'S Address in Medicine, and Mr. TREVES'S Address in Surgery. Dr. ELLISTON'S address was one to which he had evidently given time, thought, and knowledge, and with very happy results. In particular we are obliged to him for giving us in his brief review of the progress of medicine during the last two centuries the individual exploits of eastern county practitioners and savants. It is not the first time that Presidents of the British Medical Association have in their presidential addresses recorded the medical history of the locality where the congress is meeting, and we think that it is an example which other Presidents might well follow. The difficulty of finding themes upon medical and allied topics is now very acute, while the fact that we are at the close of the century has brought upon the medical world during the past 12 months an enormous mass of *résumés* of the progress of medicine viewed from general and all sorts of special standpoints—and as the century is not yet complete we may expect to meet with more addresses of similar scope and aim. Such summaries of medical and surgical knowledge, if only approximately exhaustive, make orations which are far too scrappy to be interesting to any audience, as those of us who have heard them and read them know. If Presidents of the British Medical Association will desist from attempting so large a programme as a general review of the progress of medical science, and will year by year address us from the standpoint of residents in the different medical centres of England, their contributions to our knowledge will be exceedingly welcome. In this way a complete history of the prominent members of the medical profession in the country will be formed and a hero-worship of the most practical sort will be promoted. For whereas a young man may feel that the fame of WATSON, GULL, or HUMPHRY—to mention three distinguished East Anglians—can never be his while he hears of their proud position in an enormous scientific hierarchy, he is not so certain that his own good work will of necessity go unrecognised when he learns the identity of his early environment with that of many medical heroes.

Dr. PYE-SMITH in his address deals with the well-known question as to whether medicine should be regarded as a science or an art, and we need hardly say that his contribution to the controversy is thoroughly interesting. "If," says Dr. PYE-SMITH, "medical science without art is inefficient, medical art without science is not only unprogressive but almost inevitably becomes quackery." In this sentence he seems to us to sum up the points at issue. Not that we would have had him briefer, for a good thesis loses nothing by being proved. Medicine, especially practical therapeutics, cannot be regarded as a matter of cold science. General rules cannot be laid down to guide us in treatment, except with a saving clause that the rules are so general that they must be freely departed from when sick individuals will not conform to the rules. The most logical deductions from chemistry and physics when applied to the mechanism of physiology, the most ingenious explanations of symptoms and sequelæ based upon what we regard as flawless pathology, have often failed to save life and will often again fail. For while one test-tube is the fellow of another, and one dead man behaves remarkably like another, every living individual is a bundle of complexes who refuses to be classified wholly and satisfactorily as a patient of a certain type, suffering from a certain condition, and bound to be relieved by a certain remedy. That many departments of medicine which were treated by older physicans as provinces of art have now become provinces of science is undoubtedly true; the etiology of much disease is clearer to us than it was to our forefathers, and the rational methods of prevention or cure have consequently followed. But there is still an enormous amount of work to be done and boundless experience to be tabulated and digested before the origin of many common pathological states becomes apparent and the treatment deliberately scientific. Here is where genius comes in, although Mr. TREVES is reported to have said that a medical man has no business with genius. It is genius which now and again shows us a short cut from art to science, cutting by intuition the knot that others, working according to routine, have failed to untie.

Mr. TREVES, who delivered the address in Surgery, took as his subject the contrast between the science and art of surgery in 1800 and the condition to which that science and art have attained at the present day and made somewhat dry bones speak by dint of a clear and breezy style. Mr. TREVES attributed the difference between surgery at the end of the eighteenth century and surgery at the end of the nineteenth century to four causes: an improved knowledge of anatomy, a readier method of arresting hæmorrhage, the employment of anæsthetics, and asepsis. There is no need to follow Mr. TREVES in detail while he asserts that the essential reasons of the modern extension of the fields of surgery are to be found in the employment of anæsthetics and antiseptic measures. The former has made the patient willing to undergo operations which would have been almost unendurable if he had retained his full senses, and has induced many to consent to operations who would have been unable otherwise to screw their courage to the sticking point. But, while the 40 years which intervened between the discovery of anæsthetics and the introduction of antiseptics witnessed great advances in surgical practice, the septic complications of all operations of every variety were so many and so serious that surgeons hesitated to perform operations which they knew would prove of great benefit if they should be successful, but which might end rapidly in death. The practical certainty given by the antiseptic treatment that no pyæmia or septicæmia would carry off the patient completed the value of the discovery of anæsthetics and revolutionised the practice of surgery. With regard to the value of the other two factors in the modern progress of surgery we are not so certain. The improvement in the knowledge of anatomy among the whole

body of the profession if great is only partial. It is probable that the average hospital surgeon in 1800 knew very little less of the anatomy which concerned his practice than the average hospital surgeon of the present day. No small portion of the anatomy that is now taught is perfectly useless from the point of view of the practical surgeon. The more ready methods we possess of arresting hæmorrhage make also a factor in the progress of surgery during the century which is of but little importance. The surgeons of 1800 stood in no great fear of hæmorrhage during an operation—we refer to primary hæmorrhage, of course. They applied the ligature freely, as may be seen in BENJAMIN BELL'S Surgery, the seventh edition of which was published in 1801. But they did fear secondary hæmorrhage, and rightly so, for all the ligatures or arteries were left long in order that they might come away when suppuration was fully established, and then it was that hæmorrhage often took place. The easily applied pressure-forceps of SPENCER WELLS and PÉAN are valuable assistants in a modern operation; and the much greater frequency of operations has perfected hospital surgeons in operative procedure. But for the rest, the progress of modern surgery is due to the discovery of anæsthetics and the introduction of antiseptics.

THRICE within his reign of not quite 22 years has King HUMBERT been marked down by political vendetta. In Naples, in the late autumn of 1878, when, with Queen MARGARET and the Crown Prince, he was making a Royal progress through the streets his life was attempted by PASSANANTE, but the blow fell not on His Majesty but on his faithful Minister CAIROLI, fortunately without fatal result. Again, in Rome, during the race meetings in the spring of 1897, he was assaulted on his way to the course by ACCIARITO, and again the assassin missed his aim. For the third attempt, at Monza, on the evening of July 29th, a change of weapon was tried, and the stiletto, the favoured instrument of the Italian regicide, was replaced by the hitherto untried revolver—this time with all too deadly effect. He was shot through the heart and died almost instantaneously.

Life is cheap in Italy, but King HUMBERT'S was, perhaps, the one she could least of all spare. An exemplary monarch, he inherited all his father's courage, though certainly not his father's centripetal insight into character or the conduct of affairs. His baptism of fire at Custoza in 1866 was followed up by many an act of public duty as devoted and as fearless. He seemed, indeed, to court danger and death itself in behalf of his subjects. In the appalling earthquakes in the island of Ischia in 1881 and 1883 he was conspicuous beyond even the most reckless of the relieving force in extricating man, woman, and child from under tottering edifices, the collapse of some of which had already proved fatal. In the destructive cholera epidemic in September, 1884, his absolute disregard of self is among the most beautiful passages of history. It was in Naples that the malady exploded with deadliest effect, and the KING was at the time at Pordenone in the Venetian territory, about to open a racecourse. Barely had the news come that in one night 2000 Neapolitans had been stricken down, and that of these 1000 had succumbed as much from panic as from the disease, when he addressed the Mayor of Pordenone: "A Pordenone si fa festa. A Napoli si muore. Vado a Napoli." ("At Pordenone there is merry-making. At Naples people are dying. I go to Naples.") And to Naples he went, and for more than a week he spent many hours of each day at the bedsides of the worst cases—so near to them, in fact, that several times within the 24 hours he had to retire and substitute fresh clothes for those which had to be burnt. Again and again the Ministers and even the professional men who formed his suite implored him to "think of his dynasty and the interests of his people," and his reply, as he entered another and ghastlier ward, was always the same: "I am true to my dynasty and I am thinking of my people." And this noble progress—surely as "royal" as any history records—he maintained from day to day till the panic was allayed and the disease was in full defervescence; and he returned to Rome—whence, by the way, though without his knowledge, his food and drink had been supplied—and encountered a reception as grandly impressive as ever fell to the lot of consul or emperor on the Sacred Way—alone, in a modest pony-carriage, without retinue, with difficulty making his way to the Quirinal through the dense masses of the population whose hearts were too full to cheer.

And this is the man whom Italy, who owes her unity and independence in great measure to his House, has just seen visited by the vendetta of a faction among her sons. True, it is more than probable that that faction is in collusion with the international organisation which is in perennial conflict with the prevailing social order and that this latest "example" for the "benefit" of crowned heads or constituted authorities is the result of a drawing by lot—which might have had for its object an even more conspicuous victim than King HUMBERT. But such complicity cannot absolve Italy from her pre-eminence as the instrument of such crimes—cannot blind the world to the fact that the pet, the spoiled child of modern liberalism, has made herself the recruiting sergeant of the political assassin—the source whence anarchy draws its most numerous, its most reckless, its most effective agents, whose deeds of blood have within the last four or five years been wrought on Frenchman, Spaniard, and Austrian alike—on victims absolutely unknown to their murderers, who had become the willing tools of a junto of conspirators sitting securely in congenial darkness. More than once—notably after LUCCHENI'S murder of the Empress ELIZABETH about two years ago at Geneva—THE LANCET has dwelt on the conditions, political and social, which give Italy her sinister priority in lethal crime. There is her "southern blood," all too imperfectly mitigated by education, by opportunities of honest bread-winning, by respect for the administration of justice. There is nearly half of her 30,000,000 of inhabitants almost wholly "analfabeti" (unlettered), starved not more physically than mentally; by temperament and by tradition peculiarly responsive to the sonorous rhetoric of the self-constituted vindicator of social wrong—himself again the product of Italy's bad educational and academic system, which multiplies the agitator at the expense of the artisan, the tradesman, even the husbandman. In his great scheme of university reform Dr. BACCELLI during his recent tenure of the portfolio of

Public Instruction pointed to the disastrous effects wrought on Italy by her 30 seats of learning granting degrees in many cases after the most superficial examinations, and inundating the country with unemployed professional men who, disdaining the prosaic life of the industrial bread-winner, find on the platform and in the press the channels through which their personality can make itself felt. "An academic proletariat." Such, in BACCELLI'S significant phrase, is the rank, unwholesome growth which is overrunning Italian public life; 500 "avvocati" and nearly as many "sanitari" and "ingegneri" in excess every year of the number that can make a modest livelihood out of these professions—a rapidly increasing force of the "hungry Greeklings" of Juvenal—"Graeculi" whose chosen career is that of "Gracchuli" or diminutive imitators of the heroes of Rome's præ-Sullan period. These glib orators and scribes are always in the political foreground, never more so than in Italy's latest general elections, the result of which was greatly to strengthen the socialist and anarchist vote and to intensify the feeling of discontent and unrest, with a corresponding belief in root-and-branch subversion of the prevailing order. We have no wish—it is certainly outside our province—to court political discussion; but, like every other public manifestation, politics are largely conditioned by forces physical and material, forces which in Italy have acquired a deteriorating power by neglect of laws in which all professions—none more than the medical—are interested. Bad economic and fiscal regulations, the tax on food, the enormous increase of adulteration, these and such like abuses coöperate with intellectual and moral anæmia to create a community well-nigh desperate with hardness of living and hopelessness of outlook. For the "academic proletariat" this is welcome, congenial soil to cultivate, and its products are the PASSANANTES, the CASERIOS, the ANGIOLILLIS, the ACCIARITOS, the LUCCHENIS, and the BRESCIS, the ready instruments of the "International" who think that they are vindicating society and hastening the new heaven and the new earth of the socialist ideal. Italy has made several attempts to nip such products in the bud. She has organised a series of committees "Contro il Coltello" (against the knife); she convened a congress early in 1899 to counteract anarchists. Both proved abortive. Both were addressed to symptoms, not to disease at its source. It remains for her to effect economic, educational, and sanitary reforms, thorough and far-reaching, if she is to clear herself of the imputation of committing more homicides than all Europe (minus Spain and Portugal) put together and of crowning her priority in lethal crime by the assassination of a monarch of whom the world is already saying that she was not worthy.

THE letter from the honorary medical and surgical staff of the National Hospital for the Paralysed and Epileptic, Queen-square, which we print in another column gives an account of the differences which have arisen between the staff of this hospital and its board of management. These differences have now become so acute that the distribution committee of the Metropolitan Hospital Sunday Fund a few weeks ago recommended that the grant from the Hospital Sunday Fund should be withheld from the hospital until they are settled—a recommendation adopted by the council of the Fund a few days ago.

It is notorious that for some years the medical staff have experienced difficulties in communicating directly with the board and have more than once suggested as a means of obviating such difficulties that they should have representatives on the board. About a year ago, in consequence of the conditions under which matters affecting the staff were discussed by means of delegates to the board, the request for direct representation on the board was renewed. The staff, however, failed to convert the board to their view, and as a consequence were forced to address themselves to the governors of the hospital. This they did, urging weighty reasons for the granting of such representation and fortifying those reasons by describing a state of affairs at the hospital as regards diet, nursing, and administration generally by no means creditable to the institution. The board resented the fact that such charges were not first made to them, but considering the manner in which the board had received representations from the staff in the past and the apparent inefficacy of such appeals, the staff can scarcely be blamed for taking on the present occasion what promises to be a more effective way of dealing with abuses. It can scarcely be said that the means adopted by the board of investigating these charges were such as to command implicit confidence or carry much weight. They appointed a sub-committee of three from their own body, and abstained from invoking some independent and impartial authority which could have examined both the board and the medical staff. But even from the report of this sub-committee, read in the most favourable light, it is evident that a condition of affairs existed by no means creditable to the administration of the hospital and such as the board should have been acquainted with.

The board have recently issued to the governors a statement in reply to that of the medical staff embodying, amongst other things, the report of the sub-committee just alluded to, and purporting to give the reasons for their refusal to allow the staff any representation. To our readers it will appear strange that a medical staff, perhaps as a body the most widely known hospital staff in the world, should have even to ask for such representation; and we cannot help thinking that a board which refuses such a modest request is dangerously out of sympathy with medical requirements and culpably ignorant of the eminence and high position of the men whom it treats so cavalierly. But it is instructive to consider briefly the board's reason for refusal. Such representation, it is alleged, would endanger the independence of the board, whatever that may mean. It does not seem to occur to the board that the medical staff whose names are so closely identified with the hospital have at least an equal interest with members of the board in maintaining the efficiency and enhancing the reputation of the hospital. It is also alleged that with two medical representatives on its board of management the hospital would be "in danger of having the philanthropic aspect of its work subordinated to that which is merely scientific and investigatory." We cannot help asking whether such a statement is really made seriously by a body of

men controlling a large hospital and presumably at least slightly acquainted with hospital matters? Are we to assume that every hospital in London with two or more medical members on its board of management—and this means a great majority of London hospitals—has the "philanthropic aspect of its work subordinated to that which is merely scientific and investigatory"? The childishness of such a statement alone saves it from being libellous, and we doubt whether it will carry weight even amongst the prejudiced and bigoted few for whom apparently it is meant. It is evident that under the special circumstances this question of representation is one of the highest importance. We shall return to this subject, but in the meantime it is to be hoped that the matter will be referred to some independent but competent body, in order that a grave danger may be averted from an institution which not only in England but throughout Europe and America has become, in virtue of its medical and surgical staff, identified with the most advanced neurological science, the most effective therapeutics, and the highest teaching.

WE would call our readers' attention to two recent publications which have important bearings upon the subject of the deplorable amount of enteric fever that has been prevalent among our troops in South Africa. The first is the correspondence, which has been issued as a Parliamentary paper, between Sir WALTER FOSTER, M.P., and Mr. WYNDHAM, M.P.; the second is an article by Mr. SAMUEL OSBORN, F.R.C.S., on "A Sanitary Corps for the British Army," published in the *Journal of Tropical Medicine* for July. The subject is one of immense importance seeing that it deals with the sanitary precautions which should be undertaken in future wars and as to how and on what scale they should be organised and adopted in order to be efficient. We cannot do better than take these publications as the text for a few observations, it being understood, however, that the matter is of such proportions that it cannot be at all exhaustively treated and threshed out within the limits of a short article. Army hygiene is but the application of the laws of health to the varying conditions of war. The conditions may be inflexible or the reverse, but they will rarely be so elastic and advantageously modifiable under the circumstances of war as under those of ordinary life. Where an enemy, for example, has captured the waterworks of a place or fouled the sources of supply and the troops are compelled to have recourse to a contaminated water-supply the mischief is soon done and it is irretrievable. Writing on Oct. 31st of last year Sir WALTER FOSTER pointed out that "in all human probability there will be great loss of life from fever and other maladies more or less preventable by careful sanitary work," and suggested the sending out of a small sanitary commission or a commissioner with assistants. Sir WALTER FOSTER placed his services at the disposal of the War Office, offering to go out in an unpaid capacity. Mr. WYNDHAM, after having consulted Lord LANSDOWNE and the medical authorities at the War Office, thought that the "need of special assistance is not the same in sanitary matters as in surgical operations." The Director General and Lord LANSDOWNE therefore did not see the necessity for a commission such as was suggested. Mr. WYNDHAM consequently declined, with thanks, Sir WALTER FOSTER'S offer of service.

We fully recognise the patriotic spirit which animated Sir WALTER FOSTER in making this offer. Let us consider his suggestion in its practical bearings and assume by way of argument that, in addition to the presence of Sir WALTER FOSTER on the small sanitary commission, he was aided by some of the ablest and best sanitary authorities and that their advice and recommendations were of the wisest and soundest. Still, having regard to the immense area covered by the theatre of war in South Africa, it seems to us that there would be no guarantee that the sanitary commission, unless it were ubiquitous, would have been present when and where its recommendations were most needed: we do not see how their recommendations could have been carried out except through the instrumentality of a large sanitary executive body, or how this body could have got to work until a place had been captured. Moreover, it is difficult to understand what a commission could have effected practically where a large advancing force had outmarched its supplies and the amount of available transport was altogether inadequate to its requirements. Under such circumstances the military authorities would obviously have been powerless for the time being to have given effect to the recommendations of any small sanitary commission. It must be admitted that it occasionally happens in war that the military requirements override all other considerations and that this could only be prevented or overcome by getting the enemy to forbear fighting until his opponents were ready. The fighting material has to be present first in order to capture and hold a position and protect any non-combatant labour in the execution of any necessary sanitary work.

The proposals contained in Mr. OSBORN'S paper are, it strikes us, of a much more practical character seeing that he advocates the formation of a "*corps sanitaire*" in the British army like those found in continental armies. This is no new idea. It will be remembered that in effect this question was a good deal discussed in the report of the Army Hospital Services Inquiry Committee after the Egyptian expedition of 1882, and that General Sir JOHN ADYE (who was Chief of the Staff in that war), Sir JAMES HANBURY (who was the principal medical officer), and others gave evidence bearing on this subject. It is a question, however, of much greater difficulty than is commonly supposed. It is often not practicable to employ unarmed civilian labourers on just effecting a landing on an enemy's soil or soon after attacking and capturing an enemy's position. The trend of military opinion seems to be against the increase of non-combatant establishments so as to overweigh the real fighting element and lessen the mobility of the army; the very restricted sphere of labour of a sanitary executive in any campaign, where rapidly executed movements are made, has to be taken into account, although the great utility of such an organisation in the case of sieges or where what may be termed sedentary camps and armies are concerned, and when time is not a pressing element, is fully recognised. In war we usually find that the staff of an army is overwhelmed with work and responsibility, that

transport is *the* difficulty in almost every campaign, and that the question is not so much as to what it is necessary or expedient to do but as to the means of getting it done and that with sufficient promptitude to be efficacious. For our own part, while recognising the force of the reasons that may be urged from a purely military point of view, we hold that there should be with any army in the field, in addition to the officers of the Royal Army Medical Corps, who are not only specially trained in army hygiene but should be fully alive to its great practical importance on field service, some sanitary officers of practical experience, specially selected and told off for that particular purpose, and that there should also be a large and well-organised body for executive sanitary work, such as conservancy and disinfection. It must be a large body to be of any good in a big campaign and possess a staff of directing officials practically acquainted with sanitary work. This might possibly be formed in connexion with the Quartermaster-General's Department, but it should be under the orders and at the disposal of those charged with, and directly responsible for, advising on all matters of army hygiene. Moreover, we have always held that one of the weak points of our present field medical service administration is transport. The medical service should have an independent transport entirely at its disposal which ought not to be diverted to any other purpose, except, as we have previously said, in cases of grave emergency and under the express order of the general in command who should, of course, be prepared to justify his action. These are matters which may most usefully occupy the attention of the South African Commission in the course of its inquiry and may possibly lead to some practical suggestions being made.

THE Centenary Festival of the Royal College of Surgeons of England, which commenced on Wednesday, July 25th, was concluded on Friday evening, July 27th, the final entertainment being a conversazione given at the Mansion House by the Lord Mayor of London. We gave last week some notes of the earlier proceedings and published an abstract of the Address of Welcome by the President; we now conclude our account of the Festival with reports of the meeting held at Burlington Gardens on Thursday afternoon, July 26th, when the Honorary Fellowships were bestowed, and of the Centenary Dinner held on the evening of the same day at Lincoln's Inn Hall (vide p. 339). Each of these meetings may without exaggeration be described as a brilliant success, and the President and Council must feel gratified that their strenuous endeavours fittingly to commemorate the Centenary of the College have by no means been in vain. That the PRINCE OF WALES has received a "qualification" in Surgery to add to that which he already possessed in Medicine is a fact which will be hailed with acclamation by every member of our profession, and it is, we think, a step in the right direction that is taken when leaders of the State such as the Marquis of SALISBURY and the Earl of ROSEBERY are attached to us, lightly though it be, by the link of an Honorary Fellowship. The outside world would perhaps learn to understand and appreciate us better if the calls of our daily duties left us leisure to mingle with them more freely than we do. The gathering at Burlington-gardens was a most remarkable one—noteworthy not only for its brilliance as a ceremonial but for the tribute paid to British surgery as represented by the Royal College of Surgeons of England by most distinguished foreign surgeons from all parts of the world, representative men occupying the highest professional positions in their respective countries, who showed their appreciation of the honour offered to them by travelling long distances to accept it, for it was laid down as essential that he to whom the Honorary Fellowship was offered should on this occasion be present to receive it *in propriâ personâ*. This is, we think, emphatic testimony of the estimation in which British surgery in general, and the Royal College of Surgeons of England in particular, are held. We are glad to know that our *confrères* from abroad were impressed and pleased with their reception; that they valued the distinction which was bestowed upon them is, as we have already said, evident by their acceptance of it. Our readers will find in another column the graceful words of appreciation in which certain of them expressed their thanks to the College.

Annotations.

"Ne quid nimis."

THE LATE DUKE OF SAXE-COBURG AND GOTHA.

THE death of the Duke of Saxe-Coburg and Gotha, more familiarly known in England under his title of Duke of Edinburgh, though sudden at the end was not unexpected, for he was smitten with a mortal disease. The late Prince, a reserved and quiet man, was an excellent practical sailor and rose to a very high grade in the navy. It must have been a considerable wrench to him to leave his place in English society to become a German ruler, but having decided to carry out the trust extended to him he finished his life as a loyal supporter of his nephew the Emperor William and of United Germany. His only son having died under sad circumstances and the Duke of Connaught having waived for himself and his family the succession to the dukedom, the Duke of Albany becomes reigning Duke of Saxe-Coburg and Gotha.

EPSOM COLLEGE.

"FOUNDER'S DAY" took place on Saturday, July 28th, when a large company assembled to assist at the distribution of prizes in the big schoolroom of the College. The headmaster, the Rev. T. N. Hart-Smith, M.A., was able to make a very satisfactory announcement as to the general state of the College and the progress of the boys; to give one instance, he said that two whole forms, without any selection whatever, were sent up for the London Matriculation, and that of these 20 boys 16 passed. He also referred to various honours that had been won by old Epsomians. As has already been stated in our columns,[1] the "Wakley Prize," which was established as a memorial of the Founder of THE LANCET, and which is awarded biennially by the votes of his schoolfellows and the approval of his masters to the most popular boy, was gained by an unusually large majority by Colin Giffard (a son of Mr. D. W. Giffard, M.R.C.S., of Brighton), to whom the eldest grandson of Thomas Wakley had the pleasure of presenting it. Dr. Propert, in presenting the

[1] THE LANCET, June 23rd, p. 1816.

"Propert Prize" for the highest honour won during the year to C. Lawton, alluded all too briefly to the splendid work of his father, the Founder of the College, and Sir Joseph Fayrer, the chairman, in presenting the "Martin" Prizes for classics and mathematics took occasion to insist on the value of a preliminary classical education not only for medical but for all other studies. After the distribution of prizes the company adjourned to the beautiful grounds of the College, which, refreshed by the welcome rain of the preceding day, were seen to the best advantage. An organ recital given in the chapel by the organist, the Rev. Dr. Rowton, concluded the proceedings. The boys seemed well and happy, and the College, which is, if we may use such a phrase in the columns of THE LANCET, not *too* (i.e., exclusively) medical, is certainly doing excellent work. So, to borrow a sentiment from Westminster and Eton, we say "Floreat."

THE EARLIEST SIGNS OF TUBERCULOSIS.

PROFESSOR BOZZALO of Turin in a paper read at the recent International Congress of Tuberculosis at Naples has conveniently summarised the following 11 important points which are of assistance in forming a diagnosis of pulmonary phthisis in its earliest stages. They are as follows:—1. Albuminuria alternating with phosphaturia. 2. A pseudo-chlorosis distinguishable from true chlorosis by the slighter degree of reduction of the hæmoglobin and by the less-marked vascular and cardiac disturbances (palpitation, soft pulse, pulsating arteries, &c.). 3. The presence of gastric disturbances like gastralgia, anorexia, nausea, and vomiting. 4. Tachycardia in the absence of fever. 5. Diminution of blood-pressure. 6. A rise of temperature following bodily or mental exertion above the slight rise proper to health. In women a rise of from 0·3° to 0·4° C. is observable before the onset of each menstrual period. 7. An undue tendency to sweat after exertion, mental or bodily; also night sweats. 8. Pain in the supra-orbital regions and in the neck. 9. A slight inequality of the pupils with a tendency to dilatation (mydriasis). 10. The occurrence of herpes zoster. 11. Enlargement of the spleen. Of these the first seven symptoms are the most frequently met with and possess considerable diagnostic value.

AGORAPHOBIA AND HYPNOTIC SUGGESTION.

IN the *Edinburgh Medical Journal* for July Dr. C. Lloyd Tuckey has published two interesting cases of agoraphobia treated by hypnotic suggestion. They are as follows:—Case 1. A young lady, aged 26 years, who was strong and healthy and of robust physique, had noticed for about two years that she felt nervous in church and uncomfortable in shops. This feeling increased until she became unable to enter any crowded building and very averse to going out alone. Her family history showed a freedom from mental disease and she had personally never had a serious illness. She was not on good terms with the head master of her school and this preyed on her mind, but otherwise she had no trouble. She consulted her medical man who prescribed bromides and tonics and ordered rest from work. These measures not being successful and the symptoms growing steadily worse she was subjected to hypnotic treatment. The Nancy method of hypnotising was adopted, she passed into the somnambulic stage at the second sitting, and suggestions were then made to combat her morbid fears. She was strongly assured that she would gain confidence and be able to go about as before and attend church on Sundays. She began to show improvement after this, and on the following Sunday of her own accord she expressed a wish to attend a short children's service at a neighbouring church. "She did this without discomfort, and during the following week went to concerts and theatres without fear." She was also able now to go out shopping, and after two weeks' treatment returned to her school-work and continues well. The symptoms (constituting agoraphobia) which she had experienced before when in a crowded building—such as faintness, giddiness, palpitation of the heart, and a stifling sensation at the chest, with a vague terror which she could not control—have disappeared. Case 2 was that of a man, aged 37 years, strong, healthy-looking, married, and with a family. He led a healthy life and was a first-rate golfer. He had influenza badly in October, 1899, but made a good recovery. He was perfectly well, he said, except for his "nerves," and he felt thoroughly ashamed and disquieted at their condition. He was unable to go about alone and had to be accompanied to and from his office. "He could not enter a church or theatre without feeling such depression and terror that he was forced to retire." The symptoms were beginning to affect his spirits and to keep him awake at night so that his health was failing. Under the influence of hypnotism he passed into the cataleptic stage and was very susceptible to suggestion. He was assured that he would gradually regain self-confidence and self-control, and that in a week's time he would be able to go to a theatre without discomfort. He was hypnotised daily for a week and twice afterwards. On the day named he attended a matinée performance at a theatre without difficulty. He has since resumed his ordinary life and is completely cured. At golf he was as good before as during his illness, his morbid symptoms and troubles (nervousness and feeling of fear) only occurring while in enclosed places or amidst crowds. Dr. Tuckey points out the value of hypnotic treatment in this class of case. Both agoraphobia and its opposite, claustrophobia, are favourably influenced by hypnotic suggestion if the patient is at all hypnotisable. He, however, records two instances where the patients failed to be hypnotised, though every method he could think of was tried.

GANGRENE FROM THE APPLICATION OF DILUTE SOLUTIONS OF CARBOLIC ACID.

THE *American Journal of the Medical Sciences* for July contains a very complete and important paper on this subject by Dr. F. B. Harrington. In the United States carbolic acid has become a general household remedy for the treatment of slight wounds and bruises and it is used as a moist dressing. The application of dilute carbolic acid for hours to the extremities may produce gangrene—a fact which is not generally known. Dr. Harrington has seen during the last five years at the Massachusetts General Hospital, either in his own practice or in that of other surgeons, no less than 13 cases of gangrene arising from the use of carbolic acid. From medical literature he has collected a large number of other cases which with his own make 132. The recorded cases appear to be entirely American and continental. The absence of British cases is no doubt due to the fact that a dilute solution of carbolic acid applied in the form of a moist dressing is not a household remedy in this country. However, the possibility of carbolic acid being used in this manner is by no means remote, so that the warning given by these cases is not useless. Dr. Harrington relates the following case. A delicate woman, aged 26 years, cut the tip of her right index finger. Her brother, a strong man, had two weeks before successfully treated a cut on his finger with a solution of carbolic acid. She therefore put on a bandage saturated with the same solution. This was at 6 P.M. On going to bed she moistened the dressing again with the solution. There was some pain in the finger during the night. In the morning when the dressing was removed the skin was grey and the finger was swollen and felt "lifeless and heavy." The colour changed in a few hours to a dark brown and later,

when the finger became dry, to black. The patient was first seen at the end of four weeks. The finger was in different places clay-coloured, dark brown, and black. A line of demarcation had formed near the end of the first phalanx. The remainder of the phalanx was red and swollen. Amputation was performed through the middle. Thrombosis of the vessels, superficial necrosis of the finger, and deeper purulent infiltration and hæmorrhage were found. The history of all the cases is similar. After an injury a finger or a toe is wrapped in a dressing saturated with carbolic solution. If the solution is strong enough and the time of application is sufficiently long the part will be lost. Numerous cases have been reported in which amputation had to be performed for gangrene following the use of 2 per cent. and 3 per cent. carbolic solutions. In a child, aged 10 years, the second and third phalanges of a finger were lost after the application of a 1 per cent. solution for 24 hours. Usually the time of application was from 12 to 24 hours. By a series of experiments Léval has shown that the gangrene is due to a direct chemical action of the carbolic acid on the tissues and that other dilute chemicals have a similar effect. Five per cent. solutions of muriatic, nitric, sulphuric, and acetic acids, and of caustic potash, produced gangrene when applied to an extremity for from 20 to 24 hours. On the trunk superficial gangrene occurs if the application is sufficiently prolonged. The result is not so injurious as on the extremities because of the greater thickness of the tissues and because the blood supply cannot be shut off in the same manner as in an extremity.

THE USE OF STERILISED MILK.

QUESTIONS are from time to time raised as to how far the use of sterilised milk for the feeding of infants may be desirable in the interests of the public health, and there are those who allege that sundry infantile diseases are accentuated by the exhibition of milk thus prepared. Although some of the considerations upon which objections to this sterilisation of milk are based are somewhat theoretical in nature it is important that all experiments in this direction shall be closely watched. The subject is one of no little importance to the public health, and more especially at a time like the present, when there is considerable difficulty—at any rate without the use of preservatives of one or another description—in supplying fresh milk. Under these circumstances the progress of the Infant Milk Depôt at St. Helens is not without interest. The health committee of that borough has taken seriously to heart the raid which death makes yearly in its infantile population, and it determined to study by means of a sub-committee the work which is being done in England and in France in the direction of "sterilised humanised milk." In London it was found that considerable progress was being made and that a large portion of the public were quite willing to pay the small extra charge which is being made for such milk. At Fécamp in Normandy it is claimed that the infantile mortality has been reduced from 243 to 140 per 1000 births by the use of this milk which is sterilised and humanised under medical supervision. The bottles, which are arranged in sets of nine are, after being sterilised, placed upon numbered shelves, the numbers corresponding to the number of the child for whom the bottles are intended. The parent calls for the bottles and replaces on the shelf the empty nine bottles which were taken the previous day. The nine bottles represent nine feeds per day in such quantities as the age of the babe necessitates, the children being brought weekly for inspection and weighing. At Havre there is a similar society at work. The movement is essentially philanthropic in character but the municipal authorities have been so impressed with its work that they are about to subscribe to the funds of the society. The St. Helens sub-committee were evidently edified by the results attained and they consequently recommended the town council to inaugurate a similar system in St. Helens. In August, 1899, a depôt was opened much on the Fécamp lines and by the end of the month 80 children were being daily fed from it. In consequence of the praiseworthy and public-spirited efforts of the council in this sense there has, Dr. Drew Harris, the medical officer of health, reports, been a great reduction in the infantile mortality of the borough. A large number of children already suffering from diarrhœa were brought to the depôt during August and September, a remarkable improvement having in many cases resulted. Dr. Harris speaks hopefully of the venture and all those working for the reduction of infantile mortality will watch the progress of the scheme with much interest.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.

THE Society for the Study of Disease in Children was inaugurated at a meeting held on July 24th at the rooms of the Royal Medical and Chirurgical Society in Hanover-square. The chair was taken by Dr. A. E. Sansom. There was a fair attendance of those interested in the movement. The rules, as drafted by the provisional committee, were adopted with some slight alterations. The officers and council of the new society are as follows. Honorary treasurer: Mr. Clement Lucas (London). Council: Mr. H. G. Armstrong (Wellington College), Dr. Henry Ashby (Manchester), Dr. Fletcher Beach (London), Dr. George Carpenter (London), Dr. Edmund Cautley (London), Dr. Wayland C. Chaffey (Brighton), Dr. Arthur Downes (Local Government Board), Mr. Walter Edmunds (London), Dr. Theodore Fisher (Bristol), Dr. Leonard Guthrie (London), Mr. Robert Jones (Liverpool), Dr. David B. Lees (London), Dr. Lewis Marshall (Nottingham), Dr. John McCaw (Belfast), Mr. D'Arcy Power (London), Dr. Humphry D. Rolleston (London), Dr. A. E. Sansom (London), Dr. George E. Shuttleworth (Richmond), Mr. Harold J. Stiles (Edinburgh), Dr. George A. Sutherland (London), Dr. James Taylor (London), Mr. Alfred H. Tubby (London), Mr. William H. Vickery (Newcastle-on-Tyne), and Dr. Dawson Williams (London). Honorary secretaries: Mr. Sydney Stephenson (London) and Dr. Charles H. Willey (Provincial). The society already numbers upwards of 80 original members.

PREPUTIAL CALCULI.

IN the *Boston Medical and Surgical Journal* of June 21st Dr. A. N. Blodgett has described a case of this very rare condition. The patient was a man, aged 22 years, who was of neurotic antecedents and at puberty had been in an asylum for *folie de doute*. He recovered in a few months and since that time had been engaged in business. There was extreme phimosis of a greatly elongated prepuce. No part of the glans could be exposed. The penis as a whole was small, but the distal portion was greatly enlarged, elongated, and pendulous, presenting somewhat the appearance of a small pear over which the prepuce was tightly extended. The orifice was directed to one side. On micturition the stream was discharged at an angle to the penis. The swelling was very hard, unyielding, and tender. A greenish, purulent, ammoniacal, and offensive discharge constantly issued from the orifice which was excoriated and painful. The effect on the patient was most depressing and mental symptoms similar to those which he had suffered from before were being induced. The prepuce was laid open on a director, disclosing a perfect calcareous collar around the base of the glans, filling the sulcus and prolonged upon the glans towards the meatus. The collar was broken in removal. A portion of the redundant prepuce was removed and the flaps were sutured.

Healing was uneventful. Dr. Blodgett refers to another case published in *La Grèce Médicale*, No. 7, 1899, by Dr. A. Louis of Velessa, Macedonia. The patient was a man, aged 45 years, the father of three children, who from feelings of modesty concealed his condition for seven years until he was forced to seek advice. At first pain was slight, but later it increased. The penis resembled in shape the pendulum of a clock. The prepuce was of the form of a pear and was 25 centimetres in circumference and felt like a bag full of sand. From the preputial orifice a muco-purulent, fœtid, and ammoniacal fluid constantly flowed. On incision 110 calculi and some sandy detritus were removed. 30 of the calculi reached the size of a pea, the others diminished to that of a grape seed. During the whole period, except towards the end, when the pain became too great, coitus was performed. It is to be regretted that an analysis of the calculi was not made apparently in either case.

THE STANDARDISING OF DRUGS.

THE Secretary of State for the Home Department a short time ago requested the Royal College of Physicians of London and the Royal College of Surgeons of England to advise him in reference to an application from a firm of manufacturing chemists for the performance at their laboratories of experiments on living animals for the purpose of standardising drugs. Three questions were submitted for answer, and the matter was referred to the Laboratories Committee of the Colleges for consideration and report. The Committee have issued a report answering the questions above referred to. The first was: "Is the standardising of drugs by means of experiments on animals indispensable in the public interest?" The reply is to the effect that the standardising of some remedies is a chemical process and does not involve experiments upon animals. With certain other remedies, however, containing active agents which cannot be estimated by any known chemical process, experiments on animals are absolutely necessary in order that the therapeutical strength of the drugs may be estimated. This applies more particularly to the groups of remedial agents, antisera, which have been introduced for the treatment of infective disease. An unstandardised antitoxin is, of course, a source of danger. The second question ran thus: "If so, is it desirable that, in proper cases, duly qualified experimenters working in the premises of manufacturing chemists should be empowered to perform the necessary experiments on animals for this purpose?" The reply of the Committee is a decided negative. The members "regard the authorisation of the necessary experiments in the premises of manufacturing chemists as highly undesirable." The arguments adduced in favour of this view are sound and clearly expressed, but we have not space to state them in detail. The last question for consideration was: "If it is not thought desirable that manufacturing chemists should be entrusted with this power, what other provision is it advisable and practicable to make for the purpose?" The reply to this could not have been easy to formulate but we believe the suggestions of the Committee will meet with the approval of all medical men and of those who are interested in the health of the community at large and unbiased by the sentimental objections put forward by the anti-vivisectionists. While the Committee think that it is undesirable for a licence to be given to any firm of manufacturing chemists they are strongly of opinion that it is essential for the public welfare that in the case of the antisera the antitoxic strength of the remedies should be tested and certified by some responsible authority. They suggest that the standardisation might be carried out either by the Government directly in a State laboratory or by some public body or bodies with the sanction of the Government. In Germany the standardisation is carried out in a State laboratory under the direction of a Minister; in France it is undertaken by the Pasteur Institute; while in New York the State is responsible for the work. Reference is then made to the excellent work undertaken by the Royal College of Physicians of London and the Royal College of Surgeons of England in the public interest and without pecuniary advantage. It is to be hoped that the Home Secretary will act upon the suggestions of the Committee, the weight of whose authority is unquestionable, and that laboratories will be authorised for the standardisation of the antisera.

IN our last issue, p. 242, we published the presidential address delivered at the British Pharmaceutical Conference by Mr. E. M. Holmes who was inadvertently described as President of the Pharmaceutical Society. Mr. Holmes is President of the British Pharmaceutical Conference, the President of the Pharmaceutical Society for the current year being Mr. G. W. T. Newsholme.

A TELEGRAM has been received at the Colonial Office from Sir H. A. Blake, the Governor of Hong-Kong, dated July 30th, and recording 33 cases of bubonic plague with 34 deaths during the last week.

THE Library of the Royal Medical and Chirurgical Society is now closed for cleaning, &c., and will be re-opened on Monday, Sept. 3rd, at 11 A.M.

THE THIRTEENTH INTERNATIONAL MEDICAL CONGRESS AT PARIS, AUGUST, 1900.

(BY TELEGRAM.)

THE Thirteenth International Medical Congress was opened yesterday (Thursday) in Paris. President LOUBET received the international delegates in the morning at the Elysée and M. Monis, Minister of Justice, presided at the first general meeting in La Salle des Fêtes. Professor LANNELONGUE, President of the Congress, thanked M. Monis for his welcome to the Congress, and in his address suggested the adoption of a universal nomenclature for, and a natural classification of, morbid phenomena. Over 1200 communications have been received from contributors to the proceedings of the Congress. Upwards of 5000 medical men have registered as members of the Congress, 757 being Russian, 554 German, 369 American, 316 Italian, 217 British, and the rest for the most part French.

POISONING BY BENZOLINE.—Mr. S. Craddock held an inquest at Burnham, Somerset, on July 23rd upon a little boy who had swallowed some ounces of benzoline instead of water. The child became unconscious and died within 30 minutes. A verdict to the effect that death was caused by drinking benzoline in mistake for water was returned.

ACTION AGAINST A WATER COMPANY.—At the Swansea County-court on July 25th a barrister summoned the Oystermouth Waterworks Company for neglecting to supply him with water for domestic use at his house, Caehir, Westcross. The magistrates imposed a penalty of £10 and £2 for every day since July 18th on which water had not been supplied.

PUBLIC BATHS AT ISLINGTON.—The Islington Vestry and Sanitary Authority have just completed extensive additions to the public baths in the Hornsey-road. There are now provided a new first-class swimming bath for women, 37 additional private baths, and a new laundry, with necessary accessories thereto. The total outlay of these additions is estimated at about £61,000.

THE CENTENARY FESTIVAL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

(*Continued from p. 284.*)

ADMISSION OF HONORARY FELLOWS.

As we briefly announced last week the centenary meeting was held in the theatre lately used by the University of London at Burlington-gardens on Thursday afternoon, July 26th. The President, Sir WILLIAM MAC CORMAC, having delivered an Address of Welcome (*vide* THE LANCET, July 28th, 1900, p. 281), the following Honorary Fellows who had been elected on the previous day were admitted:—

ALBERT, EDUARD, M.D., Professor of Clinical Surgery, University of Vienna; Member of the Austrian House of Lords and of the Supreme Sanitary Council; Royal Imperial Councillor of State.

BALL, CHARLES BENT, M.D., M.Ch., Regius Professor of Surgery, University of Dublin; Surgeon to Sir Patrick Dun's Hospital; Consulting Surgeon to Steevens' Hospital, Dublin.

BASSINI, EDOARDO, M.D., Professor of Clinical Surgery, Royal University of Padua; Commander of the Order of the Corona d'Italia.

BENNETT, EDWARD HALLARAN, M.D., M.Ch., Professor of Surgery, Trinity College, Dublin; President of the Royal Academy of Medicine in Ireland.

BERG, JOHN WILHELM, M.D., Professor of Surgery, Royal Caroline Institute of Medicine and Surgery, Stockholm; Surgeon to the Royal Seraphim Hospital; Member of the Direction of the "Sophiahouse"; Member and Ex-President of the Swedish Medical Society and of the Scandinavian Surgical Association.

VON BERGMANN, S. Exc. Professor Dr. ERNST, Geh. Med. Rath; Royal Prussian Medical Privy Councillor, Imperial Russian Actual Councillor of State, Knight of the Prussian Order of Hohenzollern, the Prussian Kron and Red Eagle Orders; Knight Grand Cross (with Diamonds) Imperial Russian Orders of the Holy Anne, of the Holy Stanislas and the Holy Vladimir. General-Arzt of the Prussian Army with the rank of Major-General. Served in the Franco-German and Russo-Turkish Wars.

BLOCH, OSCAR THORVALD, M.D., Professor of Clinical Surgery, University of Copenhagen; Physician in Ordinary to His Royal Highness the Crown Prince of Denmark; Surgeon to the Royal Frederiks Hospital; Member of the Royal Board of Health of Denmark.

CAMERON, IRVING HEWARD, M.B., Professor of Surgery and Clinical Surgery, University of Toronto; Surgeon to the Toronto General Hospital.

CARDENAL FERNANDEZ, SALVADOR, M.D., Vice-President of the Royal Academy of Medicine and Surgery of Barcelona; Director of the "Ho-pital del Sagrado Corazon" of Barcelona; Commander of the Royal Order of Isabella the Catholic.

D'ANTONA, ANTONINO, M.D., Professor of Surgery, Royal University of Naples; Professor of the Propedeutica Chirurgicale, and of the Institute of Surgical Pathology, of Naples.

DURANTE, FRANCESCO, M.D., Senator; Professor of Clinical Surgery, Royal University of Rome; President of the Royal Medical Academy of Rome; President of the Italian Surgical Society; Knight of the Most Distinguished Order of the "Merito Civile di Savoia"; Knight Grand Cross of the "Corona d'Italia."

HALSTED, WILLIAM STEWART, M.D., Professor of Surgery, Johns Hopkins University, and Surgeon to the Johns Hopkins Hospital, Baltimore.

INGSTON, Hon. Sir WILLIAM HALES, M.D., LL.D., D.C.L., Professor of Clinical Surgery, Laval University, Surgeon-in-Chief, Hotel Dieu Hospital, Montreal; Senator of the Dominion of Canada.

MESON, Surgeon-General JAMES, C.B., M.D., LL.D., Director-General, Army Medical Service; Knight of Grace of the Order of St. John of Jerusalem in England. Served in Canada, West Indies, and Egypt, and in the Franco-German War.

KEEN, WILLIAM WILLIAMS, M.D., LL.D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia; President, American Medical Association; President, College of Physicians of Philadelphia.

KOCHER, THEODOR, M.D., Professor of Clinical Surgery, University of Bern; Colonel, Medical Department of the Swiss Federal Army; President of the Swiss Medical Association.

KÖNIG, FRANZ, M.D., Geh. Med. Rath; Professor of Surgery; Director of Clinical Surgery at the Charité Hospital, Berlin; General-Arzt à la suite of the Army Medical Corps. Served in the Franco-German War as Consulting Surgeon to the Prussian Army.

KÜSTER, ERNST GEORG FERDINAND, M.D., Geh. Med. Rath; Professor of Surgery and Director of Clinical Surgery, Marburg; General-Arzt of I. Class à la suite of the Medical Service of the German Army.

LAMBOTTE, ELIE D. H., M.D., Surgeon of the Hospital "Bon Pasteur," Bruxelles; Professor at the "Institut des Hautes Etudes."

LANNELONGUE, ODILON MARC, M.D., Professor of Surgical Pathology, Faculty of Medicine, Paris; Member of the Academy of Medicine; Member of the Academy of Sciences; Surgeon, "Hôpital des Enfants Malades."

LENNANDER, KARL GUSTAF, M.D., Professor of Surgery and Obstetrics, University of Upsala.

MACEWEN, WILLIAM, M.D., LL.D., F.R.S., Regius Professor of Surgery, University of Glasgow.

MACLEOD, Colonel KENNETH, M.D., LL.D., Indian Medical Service; Professor of Clinical and Military Medicine, Army Medical School, Netley; late Professor of Anatomy and Clinical Surgery and of Systematic Surgery, Calcutta Medical College.

NICOLAYSEN, JULIUS, M.D., Professor of Surgery, Royal University of Christiania.

NORBURY, Sir HENRY FREDERICK, K.C.B., Director-General, Medical Department of the Royal Navy. Served in the Kaffir and Zulu Wars, 1878 and 1879.

OLLIER, LÉOPOLD, M.D., Professor of Clinical Surgery, University of Lyons.

PACHOUTINE, VICTOR, M.D., Privy Councillor; President and Professor, Imperial Military Academy of Medicine, St. Petersburg; President, Medical Council of the Empire; Knight of the Orders of St. Stanislas, St. Anne, St. Vladimir, and Prince Daniel.

POZZI, SAMUEL, M.D., Professor, Faculty of Medicine of Paris; Surgeon, Hôpital Bichat.

RAYE, Colonel DANIEL CHARLES O'CONNELL, M.D., Indian Medical Service; late Professor of Surgery, Calcutta Medical College, and Senior Surgeon, Calcutta General Hospital.

RODDICK, THOMAS GEORGE, M.D., LL.D., Professor of Surgery, McGill University, Montreal; Consulting Surgeon, Montreal General Hospital and Royal Victoria Hospital, Montreal; Member of the Canadian Parliament; Hon. Surgeon to His Excellency the Governor-General of Canada.

RUBIO Y GALI, FEDERICO, M.D., Medical Councillor; Member of the Royal Academy of Medicine of Madrid; Founder of the Hospital and Surgical Institute, Madrid.

TILLAUX, PAUL, M.D., Professor of Clinical Surgery, Faculty of Medicine, Paris; Member of the Academy of Medicine; Surgeon of the "Hôpital de la Charité."

WARREN, JOHN COLLINS, M.D., LL.D., Professor of Surgery, Harvard University; Surgeon, Massachusetts General Hospital.

WEIR, ROBERT FULTON, M.D., Professor of Surgery, College of Physicians and Surgeons, Columbia University, New York; Surgeon, New York Hospital and Roosevelt Hospital; President, American Surgical Association.

After the admission certain of the Honorary Fellows made speeches on their own behalf and that of their colleagues:—

Professor E. VON BERGMANN. (*Translation from German.*)

MR. PRESIDENT,—I beg to be allowed to thank you in the language of my country for the high distinction which has just been conferred upon us, the German-speaking surgeons.

The language of one's native land comes direct from the heart, and it is in the language of our mother that we address our dearest on earth. The German-speaking surgeons have always sought their dearest and most cherished model in the constitution, organisation and achievements of the Royal College of Surgeons of England.

Just as John Hunter by his own power founded the greatest and most beautiful anatomical and surgical museum, so have also his successors independently and relying on their own resources understood how to increase their rich inheritance in a wonderful manner, to accomplish great things brilliantly, and always to march with the times.

To be received by *such* men, into *such* a fellowship, is an honour than which no higher can be conceived.

We all wish to express to you, Mr. President, our warmest and most cordial thanks.

Professor DURANTE. (*Translation from Italian.*)

In the name of my Italian colleagues and my own I thank you, Mr. President, and the illustrious College which has invited us to this memorable festival.

Our gratitude for the high honour which you have deigned to confer upon us this day is as deep as the traditions of the Royal College of Surgeons of England are able and as profound as its merits in the progress of science and the surgical art are great.

From this temple consecrated to science, of which the priests are always brothers and devoid of all unwholesome political bias, may I be allowed to proffer a respectful salutation to glorious and mighty Britain?

Dr. W. W. KEEN.

MR PRESIDENT, MY LORDS, LADIES, AND GENTLEMEN,—On behalf of my American colleagues and myself it gives me great pleasure to return our very hearty thanks for the honour just conferred upon us. We regard it as the highest surgical honour we could receive, for "Praise from Sir Hubert is praise indeed."

Though the Royal College of Surgeons of England has attained a venerable age, it is far from decrepitude. No better evidence of this could be found than the many Members and Fellows who at the call of duty so cheerfully went to the front in South Africa. Foremost among them was your distinguished President, who, though he has reached an age when most men seek repose and slippered ease, responded to his country's call with his customary energy and alacrity. Happily the war is now nearing its end. Apart from any political results in South Africa it has had two results in which we may well rejoice. It has bound together Great Britain and her colonies in one solid empire; and through the wise statesmanship of the Most Noble Marquis of Salisbury and His Excellency the American Ambassador has joined Great Britain and America in a firm moral union in which Her Majesty if not monarch of our persons is surely queen of our hearts.

We come to you as representatives of four of our great institutions of learning—from Harvard, heavy with the snows of nearly three centuries, to Johns Hopkins in the lusty youth of less than three decades. As President of the College of Physicians of Philadelphia I represent also the oldest institution in America at all similar to your own, a corporation which includes surgeons as well as physicians, and which was already in its teens when the Royal College of Surgeons was founded. On behalf of these and of all our medical institutions we bring you our heartiest greetings on this festal occasion, in the name of sound learning and accurate scholarship.

It has been my pleasure in Philadelphia to welcome many of your Fellows, including three of your most distinguished Presidents. Some of you have even swept across the continent in luxurious palace cars in but little over 100 hours. To show how swift has been our progress and yet how young we are, I need but recall the fact that this college was nearly 40 years old before the name of Chicago—now a city of nearly 2,000,000 people—even appeared upon the map, and when you were founded, beyond the fringe of civilisation on the Atlantic coast the only inhabitants of the vast region from the Alleghanies to the Golden Gate were the buffalo, the bear, and the savage Indian.

But though so young we come not empty-handed. Three great

medical advances mark the past 100 years—vaccination, anæsthesia, and antisepsis. The first and third of these are yours, but the second—anæsthesia—is the gift, better than Magian gold and frankincense and myrrh, which to-day America lays on the altar of science.

Before that historic date, Oct. 16th, 1846, the poor victims of the knife were bound hand and foot and held in the grasp of sturdy men, but hand and cord could not repress the fearful outcries which filled the air. But at Warren's touch the thongs fell off he spoke and the stormy billows of this Gennesaret of pain were stilled; the peaceful blessed sleep of ether hushed every cry of pain. Then first was modern surgery made possible, and what was made possible by our Warren was made safe and successful by your Lister—no, not *your* Lister, but OUR Lister, for his name belongs to no age and no country, but to humanity.

It is, therefore, with a special fitness that to-day you have conferred your Honorary Fellowship upon the distinguished grandson of him who first demonstrated the blessings of ether to a suffering world. At the very time when this College was founded Warren was a student of Guy's Hospital and his certificate of attendance, signed by Mr. Cline and Sir Astley Cooper, is in the possession of his grandson.

Again, Mr. President, I beg you to accept our sincere thanks for the distinguished honour you have conferred upon us.

Professor LANNELONGUE. (*Translation from French.*)

To praise the Royal College of Surgeons of England, with which we have just become connected, and the centenary of which you are at present celebrating, would be to exalt one's own merits.

The duty of a foreigner on whom such a great honour has been conferred should be that of merely expressing his gratitude. However, there are in your past history as a surgical body during this century such achievements to be chronicled that the very mention of which in a few words may not be displeasing to you.

A journey fraught with interesting consequences which was made to England by a famous French surgeon, Roux, showed what you were in 1814. He returned from this voyage with the friendship of a number of the followers of Hunter's methods, such men as A. Cooper, Ch. Bell, Brodie, Travers, Lawrence, and with a knowledge of the secret of the ligature of great vessels, the resections—which were not practised anywhere else—flap amputations, finally, the reunion by intention, facts which were forced upon them. Roux returned in a state of mind divided between admiration of your audacity and mistrust of it. He proclaimed the brilliant features of your practice in surgery, but also did not conceal its imperfections. Such was the origin of a scientific interchange of ideas and discoveries which has never slackened between you and us. The proof of this was illustrated when on March 8th, 1847, Flourens discovered the anæsthetic action of chloroform, and a few months later, on Nov. 10th, 1847, Simpson of Edinburgh employed this agent on man with admirable results.

As early as 1852 Clover praised ischæmia, which does not detract in any way from the merits of Esmarch, and did not ovariotomy flourish in England when there was nothing but failure elsewhere? Another journey was necessary—the one of Jules Worms and Nélaton in 1860—to impel conviction. In short, you have had a man at the right moment who was able to understand the works of a Pasteur and appropriate his principles and thus to establish modern surgical antisepsis.

Gentlemen, to be associated with you is one of the most enviable honours, and we thank you.

Professor V. PACHOUTINE (*who spoke in English*).

I observe amongst the number of illustrious surgeons of many nations elected Honorary Fellows of the Royal College of Surgeons of England the names of some of the surgeons of Russia.

This is a great honour to Russian surgical science which, although in its youth, has produced already a Pirogoff.

I take this opportunity to express to this greatly esteemed College, in the name of all Russian surgeons, their very sincere gratitude for the distinction conferred upon their countrymen, and on their behalf to further express the wish that the Royal College of Surgeons of England may continue to flourish and to give to the world illustrious men, who like their predecessors will be shining lights to the surgical science, ever opening new roads for surgical practice to the benefit of the human race.

THE CENTENARY DINNER.

The centenary dinner was held in the beautiful Hall of the Honourable Society of Lincoln's Inn on the evening of Thursday, July 26th. Sir WILLIAM MAC CORMAC, the President, was in the chair and a large and distinguished company of some 300 was present, including H.R.H. the Prince of Wales, Hon. F.R.C.P., Hon. F.R.C.S., the Marquis of Salisbury, Hon F.R.C.S., the Earl of Rosebery, Hon. F.R.C.S., and the distinguished surgeons who had received the honorary diplomas of the College in the course of the afternoon. There were also present among those who did not belong to the medical profession, H.R.H. the Duke of Cambridge, the Portuguese Minister, the Lord Chancellor, Earl Spencer, the Lord Mayor of London, the Duke of Northumberland, the Earl of Kimberley, the Lord Bishop of London, Lord Rothschild, Maharajah Jugga Rao, Lord Davy, Lord Strathcona, Lord Kelvin, Sir Henry Roscoe, Mr. Justice Lawrance (treasurer of Lincoln's Inn), Lord Alverstone, and others.

The PRESIDENT, in proposing "Her Most Gracious Majesty the Queen," said: Your Royal Highness, my Lords, and Gentlemen,—The first toast I have to propose is that of the Queen, God bless her. I know nothing more touching or soul-stirring than to hear as I recently have heard them, in some distant and lonely land, perhaps in front of the enemy, the strains of our national anthem peal out. Let us drink, then, with all enthusiasm the health of the best of women and the greatest of queens.

In giving "Their Royal Highnesses the Prince and Princess of Wales and the other members of the Royal Family," Sir WILLIAM MAC CORMAC observed: I need scarcely repeat, what is well known to this company, what a large part the Prince of Wales takes in the public affairs of this country and the cordial goodwill and affection which his fellow-countrymen entertain for him, and this is not only because he is Prince of Wales, but because his incessant labour for the public good and devotion to every good cause have earned for him our profound respect and esteem. For the beloved Princess his wife every Englishman and Englishwoman, too, entertains the deepest admiration. Her charitable impulses have found further and wider scope in the necessities of the war we are still unhappily engaged in, and it would be difficult to estimate the far-reaching results of her influence. There is another member of the Royal family present whom we should at this time especially delight to honour—I mean His Royal Highness the Duke of Cambridge. There is no man in all Her Majesty's wide dominions more whole-hearted and true, and there is no one more worthy of the respect and affection which he so universally possesses. I call upon you to drink with all enthusiasm the health of our new Fellow, His Royal Highness the Prince of Wales, and that of the other members of the Royal family.

His Royal Highness the PRINCE OF WALES, who was received with enthusiasm, on rising to respond said that he did so in a totally new capacity, that of an Honorary Fellow of the Royal College of Surgeons of England. The sister College had already elected him an Honorary Fellow, so that he was indeed one of them and a member of the two professions which did such good to mankind. He was afraid, however, that he would not be allowed to practise the profession, for if he did he very much feared that he might perhaps commit manslaughter or even murder, from the results of which even his good friend the Lord Chancellor would not be able to save him. He then referred to the great progress which had been made in surgery and in graceful terms spoke of the service which had been rendered to him by the President of the College when he (the Prince) two years ago met with an accident. He also alluded to Sir William Mac Cormac's services during the war in South Africa and acknowledged the services of Mr. Treves in a similar capacity. He then referred to the work done by the medical profession in the South African campaign and said he was sure that the members of that profession had done their best and that the way in which the hospitals had been managed reflected the greatest credit on them.

The toast of "The Honorary Fellows of the College" was proposed by Sir WILLIAM MAC CORMAC, who observed: This is the first time this toast has been proposed, as it is only quite recently, as I explained this morning, that we obtained the necessary authority to grant these honorary distinctions. We attach great value to them, and it was our wish to bestow the highest honour in our power on the distinguished persons who have just been made Honorary Fellows of our College. There can be no doubt that the importance and success of this occasion have been greatly enhanced by the exercise of these powers. We are greatly gratified at being able to bestow these honours, and there can be no question that the position of the College is strengthened by the inclusion within its ranks of so many distinguished persons. To you, sir, who stand first upon our roll of honour I should like to say with what enthusiastic acclaim your name as one of us has been received. I know well—indeed, we all know—your generous sympathy and interest in our affairs and your special desire that this centenary celebration should prove worthy of the College and of the occasion. I trust that it has been so. Our great countryman Lord Salisbury has spared the time from the affairs of State to come to do us honour. We are deeply grateful to him and we have tried to make what return was in our power not only to the great statesman but to the altogether admirable chemist, a branch of science of such great importance to medicine. Lord Rosebery's great gifts are known to us all. I was lately asked by an eminent physician to tell him the principle which had guided us in our selection as Honorary Fellows of Lord Salisbury and Lord Rosebery, and my reply was that Lord Salisbury was an eminent man of science and that Lord Rosebery was eminent in everything else. All the other Honorary

THE CENTENARY OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND. THE FESTIVAL DINNER IN LINCOLN'S INN HALL.

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Fellows are surgeons, the elect of their profession, the glory of their country, and the pride of ourselves. We congratulate them on their newly acquired distinction, and we congratulate our College on the distinction they bestow upon us. Let us drink to the health, long life, and happiness of the Honorary Fellows of the Royal College of Surgeons. I have now to call upon the Earl of Rosebery, Honorary Fellow of the Royal College of Surgeons of England, to respond to this toast.

The Right Hon. the Earl of ROSEBERY, K.G., K.T., Hon. F.R.C.S., in responding, said that he had filled many embarrassing positions, but he had never felt what embarrassment really was until he had been made a Fellow of the College of Surgeons. The Honorary Fellows of the College, for whom he had been asked to reply, represented all the countries of Europe; their names and distinctions occupied three printed pages and constituted a numerical catalogue with which he was not able to deal, but he was glad to say that they had already replied for themselves in the afternoon. That left three Honorary Fellows. The Prince of Wales, however, had already replied, and so now the number was reduced to two—the Prime Minister and himself. He hoped that no one would entrust a surgical case to either his noble friend or himself. The Prime Minister was credited with the intention of performing on the illustrious mother of parliaments an operation which consisted in giving a new lease of life by first stopping that which now existed, and then flinging it into that exhilarating cauldron which would return it to life. He did not know whether the scalpel or knife would be shortly applied in any such way as that, but that was the only surgical operation which he considered could with safety be entrusted to the noble marquis. He thought that if political matters were conducted on scientific principles it would probably be better for the peace of the world. Men of science knew nothing but peace. Science was sometimes defeated, but the defeats of science were the defeats of humanity itself.

The toast of "The Guests" was proposed by Mr. THOMAS BRYANT, who said: The toast which it is my privilege to give on the present interesting occasion is that of "The Guests," who I may honestly say are the choicest representatives of every learned, scientific, artistic, and useful branch of human endeavour which this metropolis can supply. We have been led to make this selection under the conviction that the distinguished Honorary Fellows of this College whom they have been invited to meet are men of equal calibre—for the three professing but not practising Fellows who head our lists are men whom all the world delight to honour and who honour this College by becoming Fellows and thus partaking of its interests, whilst the remaining Honorary Fellows are the leading practising surgeons of the European and American States and of our own much-beloved colonies. In fact, they represent, with the Fellows of this College, the working bees of the surgical profession which utilise to the full every science and art which our guests so ably cultivate, and cull from all branches of human industry everything and anything which can possibly help towards the investigation, the prevention, and the cure of disease. Indeed, I like to think of them as the representatives of applied science for the personal benefit of mankind. They at the same time recognise no rivalry, but only friendly competition which it is to be hoped, under the banner of the Fellowship of the Royal College, will be encouraged for the benefit of the world. The name I have to couple with this toast is the representative of all that is good and all that is great in this highly-favoured Island State—the Lord High Chancellor of England—Lord Halsbury.

The LORD CHANCELLOR briefly replied.

"The Royal College of Surgeons of England, coupled with the name of the President," was proposed by Lord SALISBURY, who received on rising a cordial reception. He said that until he received the Honorary Fellowship of the Royal College of Surgeons he never was a surgeon or as a surgeon proposed the health of surgeons. His colleague in the Honorary Fellowship seemed to think that he (the speaker) knew when the Dissolution would take place. He hoped to elicit from him a secret the knowledge of which he did not possess. He also referred to the fact that the distinguished surgeons who had that day received the Honorary Fellowship of the Royal College of Surgeons of England had come from all countries of the civilised world; and with a few words of acknowledgment of the work and services of Sir William MacCormac he proposed the health of the Royal College of Surgeons of England coupled with the name of the President.

The PRESIDENT, in replying, said: I venture to think that the time for any further speech from me is almost passed, and that I shall do best if I but thank Lord Salisbury for the very kind and handsome manner in which he has proposed the toast which I will call the toast of the evening, the continued prosperity of the Royal College of Surgeons. The inclusions within its ranks of so many distinguished men to-day is a great pleasure and satisfaction to our College, and it is a further and a convincing testimony of the high esteem in which our College is held. As for myself I thank him in all sincerity and gratitude for the kind words he has spoken of me and I do this with all my heart.

At the end of the dinner (during which a selection of music was played by the band of the Coldstream Guards) each guest was presented with a volume containing the Address of Welcome, Centenary of the Royal College of Surgeons of England, by the President and also with a Souvenir of the Centenary of the Royal College of Surgeons of England, 1800 to 1900.

The accompanying picture of the dinner is from a photograph taken by Messrs. Fradelle and Young.

CONVERSAZIONE AT THE MANSION HOUSE.

The concluding entertainment of the centenary celebrations took the form of a conversazione given by the Lord Mayor of London in the Mansion House on Friday, July 27th. A considerable company was present, including many of the Honorary Fellows and other persons of distinction.

Altogether the Royal College of Surgeons of England and its President, Sir William MacCormac, are to be congratulated on a brilliant celebration of the centenary.

THE WAR IN SOUTH AFRICA.

VERY important and stirring events have taken place at the seat of war since we last wrote. The unconditional surrender of Commandant Prinsloo and a large number of Boers at Fouriesburg comes as a great relief after the meagre news of desultory and indecisive movements and fighting which have been taking place of late. The war has not only lasted much longer but has cost a far larger loss of life than it was originally supposed it would do. Still it would now seem to be nearing an end. Further resistance, as far as the Orange River Colony is concerned, may be practically considered as having terminated. It is to be hoped that Lord Roberts will soon have the line behind him restored, in which case he will be able to move upon Koomati Poort and cut off the main source of Boer supplies and so convince Mr. Krüger, when he can no longer communicate with Delagoa Bay, of the folly and futility of any further efforts on his part. We confess that we have never been able to understand why a bold attempt in this direction has not been made before—by General Buller's force, for example. It is useless to speculate on the probable capture of General De Wet's force or that of General Botha, because this has so often failed of being accomplished when it seemed imminent; still the chances of their being surrounded and having to capitulate are increasing. The Boers are still showing great activity in the vicinity of Rustenburg and they have succeeded again in temporarily surrounding General Baden-Powell. All our campaigns in South Africa have been attended with unforeseen difficulties and occasionally with disasters. In spite of the fact, however, that the Boers have succeeded in protracting the war and inflicting a grievous amount of injury on this country, they have not really succeeded in any of their more ambitious attempts and they have failed to exhibit any striking strategical ability. On the other hand, South Africa has proved, as far as the British are concerned, the graveyard of many military reputations. There has scarcely been any branch of the service in the field which has not come in for some adverse criticism, and the commissariat and supply arrangements—especially those in connexion with General Rundle's force—have not escaped. A newspaper correspondent has represented the soldiers of that force as half-starved and in a pitiable condition, and we know all

that has been alleged about the shortcomings of the medical service. This is a very poor recompense for all the toil and hardship entailed by war. According to our reading a clue to the explanation of all such occurrences will be found in the difficulties arising from insufficient transport. It must never be forgotten that the more rapid the movements of an army the harder it is for all transport and supply departments. Mr. James Van Alen, who has just returned to the United States after having been present at Bloemfontein and Kroonstadt in charge of his own field hospital, has stated that the condition of affairs there was worse than ought naturally to be expected in even a rapidly moving army. He attributes this to such causes as the neglect of the sick for the troops and the preference given to the transport of ammunition rather than of hospital supplies, to the single lines of railroad, and to the want of preparation for an epidemic. He thinks that it was a fatal error to have neglected to protect and fortify the water-supply at Bloemfontein and that this oversight accounts for much of the sickness. It is quite possible that this view may be a substantially correct one.

It is clear that when the war is over there must be a very exhaustive inquiry into everything connected with our entire army system and that wholesale changes and reforms will be introduced into it. The progress made in all that relates to modern arms and the munitions and systems of warfare has revolutionised our ideas. The fear is, perhaps, that the reforms in our own army will be based too much upon our experiences with the Boers, and that, as a consequence, we may have in future an army admirably adapted for such kinds of campaign but less effective for other kinds of warfare against trained European armies. Our army medical system will, in any case, undergo great changes in the way of development and organisation.

(FROM OUR SPECIAL CORRESPONDENT LATELY AT THE BASE.)

The feeling that pervades the whole of the medical staff, both civil and military, who are doing, and have been doing, their best in this country for the past nine months, on reading the telegrams from home during the past week is beyond description. They have disheartened beyond measure those of us who have borne the burden and heat of the day. Any stick, we are told, is good enough to beat a dog with, and on this occasion the stick seems to be the so-called "society ladies" whose concentrated wrath has been poured on the whole Royal Army Medical Corps without rhyme or reason. Of course it is not difficult to trace the reason which prompts this semi-hysterical onslaught, and to those of us who are behind the scenes there is a tinge of amusement pervading our resentment; but to the general public, whose only means of knowing what work is being done is by the medium of the daily papers, these accusations and allegations must bear the stamp of genuineness. I am not going to trouble your readers with any defence or excuse with regard to these monstrous complaints. This would only be an insult to a body of officers and men who have loyally, courageously, and with a devotion which would be hard adequately to praise, done their duty in the face of difficulties and dangers that anyone who has not been on the spot can have no idea of. On every hand, I am glad to say, amongst officers and men who have passed through our hands we are daily receiving indignant protests, and they, and they alone, are best able to judge if there has ever been a campaign in the memory of man when officers, non-commissioned officers, and men have been looked after so well and more considerately treated than in this. However, this is our reward, and I am afraid that after this campaign is finished it will take more blandishments than the War Office or Treasury possess to induce worthy men to enter a service the only reward in which is abuse.

I am glad to say that there is a steady diminution of enteric fever in this place, and that the number of admissions to hospital is declining; but of course we are sending home large numbers of men weekly who are unfit to go to the front again. I need not say that we shall gladly welcome the time when once more "peace reigns in the land."

There is a good deal of sickness in Johannesburg and Pretoria, but ample accommodation exists in the various splendid buildings that are found in these two towns, and as trains are now running with regularity, no want of supplies or comforts will be found. Whilst on the subject of comforts, I may say how grateful the men of the Royal Army Medical Corps are for the generous gifts that have been sent out to them, showing that in spite of all some people at home appreciate their efforts.

Bloemfontein, July 8th.

THE FIRST INTERNATIONAL CONGRESS ON MEDICAL ETHICS OR DEONTOLOGY, HELD AT PARIS, JULY, 1900.

(FROM OUR SPECIAL CORRESPONDENT.)

MASSAGE, QUACKS, AND NOSTRUMS.

ON Wednesday afternoon, July 25th, the Congress divided into two sections, and as complaints had been made that the discussions had assumed a purely French and local aspect it was decided that subjects of this nature should be debated in the first section and questions of a more general character in the second section. Consequently I attended the second section. The afternoon was mainly devoted to the consideration of the many and various forms of competition from which medical men have to suffer.

Dr. DIGNAT (Paris) urged that nurses and others who applied water and electric cures were practising medicine, though they were not properly qualified. There was no denying that these agencies might do a great deal of good or, if wrongly applied, a great deal of harm. Then there were the prescribing druggists and the covering doctor. All these were the parasites of the medical profession. Under the supervision of medical men their work was sometimes legitimate and useful, but they had no right to go to families and propose to treat patients unless called in by a qualified medical attendant.

Dr. SALOMON, of the department of the Sarthe, mentioned a medical man who employed a masseur to administer chloroform and a postman who acted both as a masseur and doctor.

Dr. BENEDICK (Vienna) urged prudence. He had always found that the conviction of mesmerists only served to increase the number of their clients. In one case the public prosecutor who had secured a conviction subsequently went himself to consult the quack in question. In Austria also there were many eminent scientists who were not doctors of medicine, and in certain mountainous districts there were no medical men at all. But there were families who had inherited capacities which were probably in the origin based on a true knowledge of medicine. When there was no medical man available the sick could not be prevented from consulting such persons. Also, there were peasants who undoubtedly were wonderful bone-setters—one of them had been nominated honorary doctor by the University of Prague so great was his skill. It was wiser to show some toleration to those who outside the profession undoubtedly had rendered services.

Dr. OTTOLENGHI, from Italy, delivered an amusingly inconsistent speech. He lamented the ignorance of the profession in regard to the so-called occult topics—hypnotism, mesmerism, faith-healing, suggestion, &c.—and then urged that no one but medical men should be allowed to practise those very methods about which he had declared they knew so very little.

Dr. VANDAM (Brussels) argued that there were two sorts of massage, scientific and non-scientific. The former could only be attempted by medical men with perhaps some slight indulgence towards aids. Massage was a specialty in medicine, just like dentistry, and he was of opinion that medical men only should be dentists.

Dr. SEQUEL (Paris) thought that students were too soon allowed to administer chloroform, and this led them to be careless in after life as to whom they employed for this purpose.

Dr. BERTIL BUHRE (Sweden) explained that in his country diplomas were given to gymnasts; consequently they ventured to treat patients without referring their cases to a medical man. On the other hand, as the masseur received no diploma he did not dare to act on his own

responsibility. As for quacks, they were only fined 12s., but an unqualified individual who had attempted to stop a tooth had been fined £40, which showed that the Swedish dentists were better able to protect their interests than were the medical men.

Dr. DUGRON (Paris) said that many patients seen at the hospitals were suffering from serious consequences as the result of incompetent massage. But various classes of healers had formed a strong union or syndicate, with Members of Parliament and even medical men on their committee, and they were better prepared for defence than the medical profession for attack. They called themselves the association of all those who treat patients without medicine; and as they did not give or prescribe medicine they concluded that they could not be prosecuted for the illegal exercise of medicine. Unfortunately, qualified medical men were themselves very poor judges in regard to massage. He urged that massage should be taught and then, with the same inconsistency as the Italian delegate, he claimed for medical men a monopoly of massage, though he had declared that the majority knew little or nothing about the subject. Medical men, however, did know anatomy, and no one ignorant of anatomy should venture to practise massage.

Dr. BENEDICK agreed that all medical students should study massage and that massage should only be practised when controlled by fully-qualified medical men.

Dr. C. PETIT (Paris) raised the question of the sale of medicaments and poisons without prescription. If poison could not be obtained by itself it could always be bought in the form of a specialty or patent medicine. He thought that these specialties should only be sold when prescribed. Medical men alone could judge whether a special or patent drug was good, but the public were left to decide this matter for themselves on the reading of a pamphlet or advertisement.

Dr. BITTLE C. KEISTER (Virginia, America) read a strong denunciation of the so-called "cure-alls" and other nostrums. "About a year ago," he said, "I received a lengthy communication from the editors of a very respectable medical journal requesting my services in writing up some of their advertised preparations. In their letter they took particular pains to compliment my style of writing and insisted upon an immediate reply of my acceptance of their liberal (?) offer of a three years' subscription of their $3 journal for a single 'write up' of two medicines known as 'Viskolien' and 'Micajah's Uterine Wafers.'" Dr. Keister then gave a long list of drugs advertised in America, some in a very improper manner, but he saw "no objection to a carefully prepared and skilfully compounded preparation whose formula is correctly and clearly printed on the label, giving each ingredient its proper place and full sphere of merit." He thought that physicians who prescribed nostrums were acting against the better interests of the profession. It would also be to the better interests of the dispensing chemists if they gave up the nostrum trade, and he concluded by expressing the hope that the time would come "when the ethics of the two professions will be so sacredly and mutually respected that the druggist will disdain to handle in his stock any secret or semi-secret proprietary medicine, and the physician in a like manner will discountenance their use by not prescribing them."

The Section concluded by passing a resolution against the sale of poisons disguised in patent medicaments unless prescribed. It also expressed its opinion that unqualified persons should not be allowed to administer chloroform and that medical practitioners should not dispense drugs.

THE DEBATE ON DEONTOLOGY.

On Thursday morning Dr. GRASSET read his remarkable paper on Deontology, of which I have already sent you a summary. The discussion on this communication was opened by Dr. DE GOUVÉA (Rio Janeiro), who related that medical ethics were at a low ebb till the formation of a medical society in the capital. This produced such good results that similar organisations were created in other parts of Brazil, and now these societies were all federated and the position of medical men from the deontological point of view had consequently greatly improved.

Dr. ANTONELLI (Paris) maintained that such matters could only be regulated by a superior council that should be removed from all local considerations and interests.

Dr. THIÉRY (Paris) said there should be a book for students explaining the principles of deontology.

Dr. MALBEC inquired who would have the authority to draw up such a code.

Dr. VANDAM replied by proposing that an international committee should be elected for this purpose.

Dr. PETERSEN (St. Petersburg) thought the proposal excellent. Each country should have a national committee and there should be a general international committee.

Dr. LASSALE said that in the department of the Gironde the Medical Syndicate had drawn up a code of deontology, but it had in no wise improved the black sheep of the profession.

Dr. ZAMBACCO PACHA (Constantinople) stated that in the East the conduct of medical men was most deplorable. Their alliance with the dispensing chemists was apparent to all. They frequently practised abortion, and in spite of this were not excluded from the learned societies. An international code of deontology could alone remedy this disgraceful state of affairs.

It was finally agreed that at a later stage the Congress would be called upon to vote on the election of an International Commission to deal with the whole question of deontology.

THE MEDICAL CHAMBERS OF AUSTRIA.

The report by Dr. HENRY ADLER (Vienna) on the Medical Chambers of Austria was now read. Many medical congresses had been held before a definite project was approved in 1886 at the Innsbruck Congress, and it was on Dec. 22nd, 1891, that a law instituting these Medical Chambers was passed. The law states that all qualified practitioners must be attached to the Medical Chambers except in the case of a State functionary or an army surgeon, or when a medical man has formally retired from practice. The Chamber has to attend not only to such matters as concern the dignity of the profession but also to sanitary matters affecting the public health. The Chambers must organise all medical competitions that may be held, be ready to express an opinion on medical questions, to advise the authorities, and to act as a court of honour in regard to personal quarrels between members of the profession. In case of misconduct on the part of a medical practitioner the court of honour may, after a reprimand, impose a fine of not more than 200 florins and may finally temporarily or permanently withdraw the culprit's right to practise. The fines paid go to swell the funds of the Chamber. The Chambers themselves are controlled by the local government authority which may rescind the action of the Chambers when they have exceeded their powers. It may even dissolve a Chamber and order a fresh election. These Chambers must consist of at least nine members; that of Vienna has 29 members and the members are elected by the profession every three years. Medical practitioners who are more than 60 years old may refuse to be elected. All the services rendered are honorary. The hopes entertained as to the good effects to result from this institution have not been realised. Firstly, because the Chambers have not power enough to act. The Chambers have been of use in improving the course of medical education and in softening the acuteness of the competition between medical men, but there remain unaltered many abuses. They have had very little influence on sanitary matters nor have they been able to regulate the supply of medical men in accordance to the needs of the various localities. In regard to contract work for friendly societies, the fact that there is a grievance is now at last recognised, and both the State and these societies will soon be made to reckon with the medical profession, but the result will depend upon the energy and unanimity with which medical men support the Medical Chambers.

THE GERMAN MEDICAL CHAMBERS.

Dr. PAUL SCHOBER read a paper on the Medical Chambers in Germany, saying that those of Prussia were the best organised. Their object was to attend to matters affecting public health and all that concerned the honour of the profession. Each of the 12 counties of Prussia had a Medical Chamber, and every 50 practitioners elected one representative member to these Chambers. The elections take place every three years and the votes are sent in writing by post to the president of the local Chamber. The Chambers have the right to make proposals to the local government authorities, especially on sanitary questions, and to be represented on the county sanitary councils by one or two members. Each Chamber has its court of honour, consisting of the president, three members, and a member of a legal Chamber. It can inflict an admonition, a reprimand, a fine not exceeding 3000 marks, and may also disfranchise the guilty member. Any practitioner in Prussia may be summoned before these Courts of Honour

and there is a supreme court of appeal at Berlin. There is also a central committee at Berlin consisting of one member from each Medical Chamber which acts as an intermediary between the Government and the Chambers and between the Chambers themselves. None of these functions are paid but allowances are made for travelling expenses. All medical practitioners have to subscribe, the amount being fixed by the Chamber according to their requirements, and consequently it varies. The fines inflicted are also kept by the Chambers. This institution of Medical Chambers is too new to say much as to the effects obtained; but, on the whole, the medical profession is well satisfied.

Dr. JAFFÉ (Hamburg) protested that there was nothing new in the idea of a Medical Chamber. Those of Bavaria were much older than the Prussian medical Chambers and the same might be said with regard to Saxony, Hesse, and Würtemberg. On the other hand, there were some parts of Germany that had no such organisations. In all cases the first object of a Medical Chamber was to maintain the dignity and authority of the profession. They were, however, in need of a generally accepted deontological code. He also thought that the code of honour governing a medical man engaged in civil practice should apply equally to army surgeons and State functionaries. There should be equality and there could be no difference in matters of honour. Though at Hamburg their Medical Chamber could also inflict a fine of 3000 marks, by far the greatest punishment was the publication of the sentence. He concluded by urging that some such institutions as the Medical Chambers should exist in all countries and that their deontological code should emanate from an international court.

SHIP SURGEONS.

In the afternoon the Congress was again divided into two sections. In the first section the following resolution, proposed by Dr. BOREL and Dr. FAYOL, was adopted:—

Considering that ship surgeons have for mission (at least in France) the duty not only of medical surveillance over their ships but also of protecting the ports they enter from infectious diseases, this mission cannot be faithfully fulfilled if the surgeons are the dependant and paid servants of the ship-owners; therefore the Congress urges that the public authorities should render ship surgeons absolutely independent of ship-owners and that they should be responsible only to the maritime, sanitary, or port authorities.

A MEDICAL STRIKE.

There was also some discussion as to the relations of medical men with the large life insurance companies, it being urged that these should be treated as ordinary clients and no special terms made. Then Dr. BAUDRY (Rennes) related that a medical strike had taken place at Ille-et-Vilaine against the poor relief authorities. The latter proposed to pay the medical men who attended paupers one franc per consultation and one and a half francs per visit, medicine included. The strike failed through the action of some "blacklegs."—The Congress blamed the latter and congratulated the practitioners of Ille-et-Vilaine upon their energy and courage.

Dr. ISSA HAMDY PACHA (Cairo) described the strange situation of a medical man who was calumniated by another practitioner who had violated his pledge of professional secrecy. The victim in this case could not defend himself because to do so he would also have had to violate professional secrecy and therefore had to suffer unjustly.—The Congress approved of this conduct and congratulated the practitioner in question upon his reserve.

MEDICAL SOCIETIES.

In the second section Dr. MANOLESCU (Bucharest) related that a medical association of Roumanian doctors had been formed. It issued a monthly journal, held an annual congress, and discussed both sanitary and medical questions.

Dr. CAYLA described the medical societies of the department of the Seine. Some were 20 and others were 50 years old, but it was only during the last 10 years that they had discussed economical questions. At first these societies had been isolated; now they were united by their General Council.

Mr. ADOLPHE SMITH said that the description given corresponded with the general character of the numerous medical societies existing in England, several of which were over a hundred years old. These societies were highly respectable and rather than admit the black sheep of the profession had in some instances formed medical unions outside of their own ranks, for it was most necessary to bring into line those who were otherwise likely to become "blacklegs." Were the medical societies of France inclined to act in a similar manner?

Dr. DECOR replied that the French medical societies were old and when first established had not foreseen the present economic evolution. But it was a stain to be driven out of such a society or to be refused admittance, and this acted somewhat as a check.

Dr. BELLENCONTRE urged that the duality of societies was quite justified. There were the medical societies that might form the aristocracy of the profession, and there were the medical syndicates or fighting medical unions who would deal with the black sheep, &c.

Dr. CLEMENTS (Bucharest) said that the Roumanian Medical Association was more like the English and French medical societies. Medical men of good reputation all belonged to the association. Those whose reputation was more doubtful were put into a sort of quarantine and kept out of the association for a while. There was a general committee at Bucharest which acted as judge in such matters.

Mr. H. NELSON HARDY, treasurer of the British Police Surgeons' Association, read a paper urging that as the medico-legal advisers of the police the surgeons were insufficiently paid. They had to appear as witnesses for the Crown and often the remuneration they received did not cover the expense they incurred.

During the same afternoon Mr. ADOLPHE SMITH read a paper on the Organisation of Medical Unions in England, describing the development of economical forces which had rendered such organisation absolutely necessary. This was really an essay on political economy as affecting medical practice followed by an account of various medical unions formed in England. The paper was listened to with great attention and evoked marks of approval.

In the evening the members met at the Palais d'Orsay, where a banquet was held under the presidency of Dr. BROUARDEL, the Dean of the Faculty. This was the first banquet given in the magnificent hall of the hotel attached to the new station of the Orleans Railway. The band of the 130th Regiment of the Line played selections during the banquet. Of course there were numerous toasts and enthusiastic speeches, which were all the more enjoyable as the members present felt that their Congress had proved successful and wa likely to lead to great things in the near future

INSURANCES FOR MEDICAL MEN.

As usual, there was a certain rush on the last day of the Congress. The papers that had not yet been read had to be hurried forward so as to afford time for the final resolutions which were to complete the work of the Congress. Consequently the sitting began early on the Friday morning when Dr. LANDE'S paper on Mutual Assistance and Insurance for Medical Men was read. First he showed the expense in time and money of medical education, and then that the practitioner's income depended on his health, and was rarely sufficient to admit of his saving any considerable sum. Therefore the practitioner should insure his life early when the premium to be paid would not be high. Unfortunately, medical men were, as a class, somewhat improvident. The paper then described the various charitable or semi-charitable institutions existing in different countries that were likely to help practitioners in distress. After hearing all these details the Congress endorsed the conclusions of the report which were to the effect that the means of insurance for medical men were not yet sufficiently developed, that there should be insurance against sickness and old age as well as against death, and that there should also be a fund for old-age pensions. Finally, medical men should not only pay annually insurance premiums for their own personal benefit, but they should also pay a small sum, be it only 10 francs a year, to create a general fund for the aid of any exceptional distress occurring among members of the profession or their families.

THE FORMATION OF MEDICAL UNIONS OR SYNDICATES.

The paper on the Organisation of Medical Defence was taken next. It was written by Dr. SALOMON, member of the Administrative Council of the Union of the Medical Syndicates of France. Dr. Salomon considered that the medical profession had fallen in a great measure from its former high estate. Medical men had failed to notice the tremendous transformation going on around them. Other classes of the community had armed themselves, formed powerful associations, trades unions, coöperative societies,

benefit societies, and sick funds. What had the medical men done? Formerly no one outside the profession knew anything at all about medicine and they had to depend entirely on the medical man. Now with the spread of education, the literature of patent drugs and specialities, any number of people doctored themselves and rarely resorted to the advice of a medical practitioner. Others obtained such advice for a mere nominal sum through the agencies of friendly societies or for nothing from the hospitals. In the meanwhile medical men avoided each other, indulged in rivalries and antipathies, and by reason of their disorganised and divided condition became a ready prey and the victims of numerous forms of exploitation. It was said that there were too many medical men. The evil rested rather in the fact that too many medical men crowded together in large centres. Within the last ten years the number of practitioners had doubled in the departments of the Seine (Paris), Seine et Oise, Rhône, Nord, Bouches du Rhône (Marseilles), and Seine-Inférieure (Havre). Yet in other, especially rural, districts there were not enough medical men. There were also far more foreign medical men practising in France than there used to be. The author of the paper then reviewed at length all the causes that tended to diminish the possible income of medical practitioners, poor relief, charities, friendly societies, hospitals, improvement in the public health, prescribing chemists, the illegal practice of medicine, &c. The second portion of the report dealt with such measures of defence as had been attempted and mentioned that the honour was due to Orfila of having founded in 1833 the first French medical association. It was L'Association des Médecins de la Seine. Then in 1859 L'Association Générale des Médecins de France was established chiefly for the purpose of helping medical men in distress. But they also gave moral support in professional questions. The General Association and its branches were described as something less than a syndicate or union but something more than a mere charitable or benefit society. But the General Association of French Doctors had no mandate or authority to defend professional interests and nothing further was attempted till the year 1880, when the first medical syndicate was founded at Montaign, in the Vendée, by Dr. Mignen—unless the *Concours Médical*, which was founded in 1879, be taken as its precursor. This latter had been the work of Dr. Cézilly, whose absence from the Congress through illness led to a demonstration in his honour and to expressions of sympathy. When the number of syndicates had increased they formed a union of syndicates under the presidency of the late Dr. Gibert of Havre. In 1885 there were 40 medical syndicates in France. But the movement was in a great measure checked by the verdict given by the Tribunal of Domfront which declared that the law of March 21st, 1884, which gave a legal standing to syndicates, only applied to workmen's syndicates or trades unions. Now, however, a new law, that of Nov. 30th, 1892, on the practice of medicine, granted to the members of the medical profession the same rights as had already been acquired by the working classes, with this exception, however, that medical syndicates might defend the interests of the profession against all persons except the State, the Departments, and the Communes. Thus the powers and action of medical unions in France were more restricted than were workmen's unions. Of course, the medical profession would not rest satisfied till this disability was removed. Dr. Salomon then went on to say: "We are reproached for having imitated the workmen without perceiving that the necessities of our professional life place us nearer to workmen than to employers. As our colleague Dr. Chantemps said, 'We are workmen, the *élite* of the working-class if you like, but as skilled artisans we are alone in the accomplishment of our work—we do not pay wages to others to work for us.' This opposition explains many abstentions. The syndicate of the Seine, for instance, has only about 1000 members out of some 3000 practitioners. Not that our syndicate, like the other syndicates, has failed to render itself sympathetic, but because the greater number of our colleagues obey sentiments of selfishness, which prompt them to attend only to their own individual affairs, and does not allow them to pause to consider general interests or to trouble about confraternal relations and the future of the profession. Further, we must recognise that the syndicates have systematic irreconcilable opponents. These enemies are of two sorts, those who are at the top, and those who are at the bottom, of the ladder. At the top are the successful medical men who have nothing to fear from a crisis in the profession, who often do not even understand the dangers that menace the profession. At the bottom are poor, unscrupulous, wretched individuals of all sorts, who have to resort to all manner of stratagems to secure a bare existence and who keep away from us so that we should not see what they do." In spite of all this the cause was gaining ground daily. The report then went on to relate that the Medical Syndicates had succeeded in causing the law to be more strictly applied in prosecuting quacks, in bringing grievances to the front, and produced some improvements in raising the tone of the profession, and in engendering a more brotherly feeling among practitioners.

When the discussion was thrown open Dr. DUPLESSIS eloquently pleaded in favour of liberty while to-day everyone was seeking to establish rules and checks. He thought that the only check should be a moral check. He strongly objected to have the conduct of a medical man judged by a lawyer. The latter could never understand the ethics of a man of science. The lawyer adhered rigidly to the text of a law; the man of science knew that what was thought to be the truth yesterday had been proved false to-day, and what they now believed might be demolished to-morrow. By all means let moral restraint be brought to bear, but there must be no compulsion.

Dr NOIR replied that the liberty of to-day could not rest on the same basis as that of yesterday. The economic evolution had altogether changed the basis. To-day they had to abandon a great deal of their individual freedom in favour of the spirit of solidarity and so as to acquire the power of resistance.

Mr. ADOLPHE SMITH said there was no freedom for the man who was starving—he had to sell himself to the first bidder. He had more freedom in submitting to the discipline of his professional union than to the tyranny of a taskmaster who profited by his isolation and helplessness. So far the Congress had been mainly useful in bringing forward a long list of grievances. It was time to pass from the diagnosis to the prescription of remedies. United, the profession was the absolute master of the situation; the great battle, therefore, would be, not against outsiders, but against medical men who refused to unite. The medical man was the principal foe of the medical profession. Thus, for instance, at Wolverhampton and Coventry the medical unions of those towns would have been successful recently had not medical men from Birmingham come to consult with ostracised practitioners in those two towns. On the other hand, the consultants of Norwich had refused to act in a similar manner on behalf of the ostracised practitioners at Great Yarmouth. How were the more prosperous members of the profession to be brought into line? For his part he thought that there had not been sufficient use made of the weapon of publicity; and even if this were to lead to prosecutions for libel, or in France to arrest for attempting to interfere with the freedom to work, no great cause had lived without its martyrs and a public trial was the cheapest form of publicity, the most effective means of propaganda.

After some further discussion the following resolutions were carried:—

1. For the purpose of preservation and of professional defence all medical practitioners should unite and act according to the principles of solidarity.
2. This union and this solidarity will be established by the organisation of societies which may be at once chambers of discipline and associations for professional defence.
3. The syndicate will more especially take in hand the work of professional defence, for it alone has the necessary attributes to struggle against the attacks made by society upon our monopoly.
4. There should be but one syndicate per department, so that all members of the syndicate shall have to submit to the same rules.
5. The same union and solidarity should exist between the syndicates as exists between the members of the syndicates. They will thus form the syndical union and the union of the syndicates.
6. The union of the syndicates shall form, for France, a single federation for the entire territory. It shall be the agent of centralisation and of decentralisation, and ought to be officially invested with the power to go to law as the representative and in the stead of any one affiliated syndicate.

After this important vote the Congress adjourned.

THE MEDICAL ASSOCIATION OF NORWAY.

In the afternoon the Congress at first divided into two sections and subsequently met collectively to close the proceedings. In the first section Dr. HANSSON (Christiania) gave some account of the Norwegian Medical Association. It had drawn up a deontological code dealing with the relations of medical men towards medical men. It also treated the question of sick club practice and laid down as

a principle that the post of medical officer to such institutions was not to be accepted unless with the consent of the local branch of the Medical Association. They had secured an increase amounting to 75 per cent. on the sum paid to medical officers of these clubs previously to 1888. The association had likewise established and maintained a minimum for country practice, but then about 90 per cent. of the medical men in Norway belong to the association. This was in itself a sufficient explanation of these remarkable successes.

MEDICAL CHARLATANS.

Dr. LASSALE then spoke about medical charlatans. It was a mistake, he said, to believe that all charlatans were outside the profession and illegal practitioners. There were two means of action—conscience and the law. Those who had a conscience had no need of the law; those who had no conscience must have the law. The profession should organise its own police which should warn the public against the charlatans who were within the ranks of the profession. He was in favour of discipline as well as of liberty. While they talked about liberty their difficulties and misery increased. Besides, if liberty was unnecessarily and vexatiously interfered with the profession could easily change those whom it had placed in command.

Dr. BENEDICK (Vienna) said that he considered that the Austrian Medical Chambers had taken some false steps and he was now fighting against some details of their policy. Nevertheless, he was very glad that these Chambers existed. Every institution had its good and its bad side. He was in favour of Medical Chambers possessing extensive powers. There would be abuses and conspiracies, intrigues, troubles, and quarrels; but all this could be cured by the vote of the members, and in any case the good would outbalance the evil.

Some discussion ensued as to the advisability of forming an Order of Doctors, but the hour was too advanced to go seriously into this matter.

THE CONCLUDING SCENE.

At about 5 o'clock the members from the other section returned to the great amphitheatre of the École de Médecine and the Congress, sitting as a whole, at once proceeded to discuss where and when it should meet again. A proposal that it should meet in the same town as that in which the International Medical Congress met was rejected on the ground that the Congress should meet where the movement in favour of forming medical unions or syndicates had most need of its presence. It was finally decided that the Congress would meet in three years' time in Belgium. Then a great deal was said about an international committee which should meet and try to draw up a deontological code. Beyond a general feeling that this ought to be done, that the committee which had organized the congress, and Dr. Vandam who had made the proposal, should help in the work, nothing very decisive was voted. No names were proposed of members to constitute this committee, and the matter at present assumes merely the character of a pious wish. Nevertheless, it is probable that something will be done and a project presented to the next Congress.

A number of resolutions carried in the sectional meetings were read out. Some met with approval, others were referred to the French National Congress as being of too local a character, and then Dr. LEREBOULLET rose to close the Congress. He spoke with feeling of the gratitude that was due to all who had so efficiently helped this first and most difficult step towards the international organisation of the medical profession for the purpose of defending its ethical principles and economic interests. With deep emotion he declared himself convinced that a great and good work had been accomplished.

Dr. VANDAM moved a vote of thanks from the Congress to its President, Dr. Lereboullet, to the secretary, Dr. Jules Glover, and to all the other French organisers, which was cordially awarded.

With cheers and many friendly salutations and expressions of mutual goodwill the members of the Congress dispersed.

Paris, July 30th.

VACCINATION EXPENDITURE.—At the meeting of the Falmouth Board of Guardians, held on July 26th, it was reported that the vaccination fees during 1898 and 1899 amounted to £17 and £26 respectively. For the first six months of 1900 the fees amounted to £255.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary Comitia was held on July 26th, Dr. W. S. CHURCH, the President, being in the chair.

The PRESIDENT announced that the Bradshawe Lecture would be delivered on Nov. 6th by Dr. Archibald Garrod on "The Urinary Pigments and their Pathological Aspects."

Dr. Gee, Sir R. Douglas Powell, and Dr. F. Andrewes were nominated to adjudicate on the Weber-Parkes Prize for 1901.

The following gentlemen having passed the required examination were admitted Members of the College: Alexander Gunn Auld, M.D. Glasg., Noel Dean Bardswell, M.D. Edin., L.R.C.P., Arthur John Cleveland, M.D. Lond., L.R.C.P., Henri Dardenne, M.D. Edin., Francis Woodcock Goodbody, M.D. Dub., Francis Henry Hawkins, M.D. Edin., Thomas David Lister, M.D. Lond., L.R.C.P., Wilfrid Brougham Warde, M.D. Lond., L.R.C.P., Thomas Rowland Charles Whipham, M.A., M.B. Oxon., L.R.C.P., and Oliver Key Williamson, M.A., M.B. Camb., L.R.C.P.

Communications were received (1) from the Secretary of the Royal College of Surgeons of England; (2) from the Director-General, Medical Department of the Navy, on the registration of volunteers for emergency service as surgeons in the Royal Navy; and (3) from the Vice-Chancellor of the University of London, requesting the College to elect two Fellows to be Members of the Senate of the University. Dr. P. H. Pye-Smith and Dr. W. H. Allchin were elected Senators.

On the proposal of Dr. NORMAN MOORE, seconded by the REGISTRAR, the following motion was carried by acclamation:—

That a vote of thanks and the sum of 100 guineas be given to Dr. Allchin as an acknowledgment of his services during several years and on numerous occasions as secretary to the University Committee, as representative of the College before the Royal Commissioners and the Prime Minister, and in many other ways in relation to the reconstruction of the University of London.

On the recommendation of the committee of management the following institutions were added to the list of institutions recognised by the Examining Board in England: (*a*) For instruction in chemistry, physics, and practical chemistry, the Municipal Technical School, Halifax, and the Modern School, Bedford; (*b*) for instruction in chemistry, physics, practical chemistry, and biology, the Technical College, Huddersfield, and the Municipal Technical College, Derby.

Reports were received from the representative of the College on the General Medical Council, from the Fever Hospitals Committee, from the Finance Committee, from the Library Committee, and from the curators of the museum. By-law 103, as amended to make it conformable to the conjoint regulations, was re-enacted a second time.

The Moxon medal was awarded to Sir William Tennant Gairdner, K.C.B., F.R.S., M.D. Edin., Emeritus Professor of Medicine in the University of Glasgow, as having pre-eminently distinguished himself by observation and research in clinical medicine.

The adjudicators of the Weber-Parkes prize reported that they had been unable to award the prize as no essay of sufficient merit had been presented.

The following were appointed censors and examiners for the ensuing year. Censors:—William Cayley, M.D. Lond; Charles Theodore Williams, M.D. Oxon.; Sir Dyce Duckworth, M.D. Edin.; and Thomas Henry Green, M.D. Lond. Examiners:—Chemistry and Chemical Physics: Percy Faraday Frankland, Ph.D., F.R.S.; Frederick Daniel Chattaway, Ph.D., D.Sc.; Arthur Pillans Laurie, D.Sc.; Henry Wilson Hake, Ph.D.; and Henry Foster Morley, D.Sc., F.C.S. Materia Medica and Pharmacy: Francis Warner, M.D. Lond., William Carter, M.D. Lond., Hector William Gavin Mackenzie, M.D. Edin., Edwin Cooper Perry, M.D. Cantab., and James Calvert, M.D. Lond. Physiology: Marcus Seymour Pembrey, M.D. Oxon., John Sydney Edkins, M.B. Cantab., and Robert Arthur Young, M.D. Lond. Anatomy: George Robertson Turner, F.R.C.S. Eng., L.R.C.P. Lond., and Alfred William Hughes, M.B. Edin., F.R.C.S. Eng. and Edin. Medical Anatomy and Principles and Practice of Medicine: Joseph Frank Payne, M.D. Oxon., Sir Thomas Lauder Brunton, M.D. Edin., Thomas Barlow, M.D. Lond., Francis

de Havilland Hall, M.D. Lond., Herbert Isambard Owen, M.D. Cantab., Percy Kidd, M.D. Oxon., John Abercrombie, M.D. Cantab., Nestor I. C. Tirard, M.D. Lond., Donald MacAlister, M.D. Cantab., and William Hale White, M.D. Lond. Midwifery and Diseases peculiar to Women: Charles James Cullingworth, M.D. Durh., John Phillips, M.D. Cantab., Amand J. McConnel Routh, M.D. Lond., C. Montagu Handfield-Jones, M.D. Lond., and Robert Boxall, M.D. Cantab. Public Health: Part I., James Lane Notter, M.D. Dub.; Part II., William Henry Corfield, M.D. Oxon.

Professor Clifford Allbutt, Regius Professor of Physic at Cambridge, will deliver the Harveian Oration on Oct. 18th (St. Luke's Day). Dr. Henry Head has been appointed the Goulstonian Lecturer, Dr. J. F. Payne the Lumleian Lecturer, and Dr. W. D. Halliburton the Croonian Lecturer for 1901, and Dr. J. W. Washbourn the Croonian Lecturer for 1902.

THE FIRST INTERNATIONAL CONGRESS OF THE MEDICAL PRESS HELD AT PARIS, JULY, 1900.

(FROM OUR SPECIAL CORRESPONDENT.)

THE OPENING CEREMONIES.

ON Thursday afternoon, July 26th, the inaugural ceremony of this Congress was held at the Press Pavilion on the Exhibition grounds. Detained at the International Congress of Deontology I could not be present, but from what I heard from those who attended and from papers remitted to me I am able to give some account of the proceedings. It appears that there was quite a demonstration when Professor Virchow of Berlin arrived. Everyone rose and sought to manifest his respect for the eminent German *savant*.

Professor CORNIL opened the proceedings. He welcomed Professor Virchow who for 60 years had grouped in his *Archives* the writings of the most learned Germans. In France also the medical press had grown and could now boast of some 30,000 readers. It reflected medical life and should help to teach medical men what were their duties and what were their rights. Modern progress had been achieved by two scientific revolutions, first the pathological conception of the cellules, and secondly the Pasteur doctrines. The medical press had largely contributed to spread these new teachings.

M. MILLERAND, Minister of Commerce, who had entered while Professor Cornil was speaking, now rose and claimed that he also had been a member of the press and would doubtless return to journalism when his Ministerial career was at an end. If to-day they had scientific journalism as distinct from ordinary journalism, this was due to the natural economic evolution which classified and sub-divided labour. Besides many of the questions to be discussed interested the entire press, such as, for instance, the division between legitimate publicity and that form of publicity which tended to degrade the journalistic profession. It would be a great honour for the Congress should it be able to deal with such delicate matters. He concluded in welcoming all the foreign delegates and especially Professor Virchow.

Professor LANDOUZY recalled the fact that the first newspaper published in France was founded by a medical man and that Renaudot's Journal sometimes dealt with medical matters. The press, he said, was the most universal of universities and it would be the mission of the medical press to aid the Government to solve all matters affecting the interests of the profession.

Professor VIRCHOW congratulated the Association of the French Medical Press on having taken the initiative in organising an international congress of the medical press. He was happy to think that the creation of an international association might result from the Congress and thought that it was quite right for the medical press to meet apart from the Medical Congress.

After the election of the officers for the Congress all the members went by a special steamer to the Hôtel de Ville, where they were received by M. Grébauval, President of the Paris Municipal Council, and by M. Lépine, Prefect of the Police.

Professor CORNIL introduced the delegates and pointed out the importance of the medical press, as there were now actually 300 medical papers published in France. It is to be hoped that on this occasion Professor Cornil omitted to mention that the medical press had 30,000 readers, for as this would mean an average of only 100 readers per journal it does not say much for at least some of these publications. Professor Cornil was more happy when he described the practical services of the medical press and how Berlin owed its sewers and its sewage farms to the active press propaganda led by Professor Virchow.

Both M. GRÉBAUVAL and M. LÉPINE made suitable replies and then led the delegates to a well-supplied buffet.

NEWSPAPER PUFFS.

The Congress began business on Friday morning in the great amphitheatre of the École Pratique at the Faculty of Medicine. Professor CORNIL was in the chair. The Government delegates of the foreign medical press were first called upon to speak, and Dr. MENDIZABAL, of the *Gaceta Medica* of Mexico; Dr. GALLET, in the name of the Belgian medical press; Dr. DIAKONOW, for the Russian medical press; Professor BROSSI for Italian journals; Dr. HANSSON for the Norwegians; Dr. EHLERS for the Danes; and Dr. POSNER for the German medical journals, all made short congratulatory speeches.

Dr. MARCEL BAUDOUIN then described his system of tabulating and registering all scientific publications in a manner that greatly facilitated researches. This was followed by a discussion on the sort of advertisements that might be published in a medical paper. The great question related to what is known in France as a *réclame*, a term which may be generally taken to mean a puff. Of course, it is easy in discussing to confuse the issue. Notices and criticisms even when favourable to an article which has a commercial value may be quite legitimate. What is illegitimate is that such notices should be paid for as if they were advertisements. Dr. POSNER protested that such *réclames* were unknown in Germany.

In France, to make matters worse, papers redolent with *réclames* were now being distributed gratuitously to the members of the profession.

A report on Gratuitous Medical Journals by Dr. LABORDE and Dr. ROMME was read in which they urged that advertisements must be relegated to a special distinct part of the paper and not inserted in all directions.

The discussion was adjourned till the next day.

Dr. BLONDEL urged that medical papers should not publish advertisements of drugs if these were likewise advertised in the general political press.

After discussing without coming to any particular decision the question of newspaper exchanges Dr. DE MAURANS read a paper urging that efforts should be made to adopt a unique international classification for scientific terms. The morning sitting was terminated by Dr. DOYEN who reproduced by a kinematograph several operations which he had performed. This exhibition excited much interest and admiration; its practical utility, especially for students, was highly appreciated.

At the afternoon sitting Professor C. RICHET spoke on the necessity of decimal classification of periodic journals. In the 16 volumes of the Index Catalogue, which dates back 20 years, there were already 1,097,535 separate titles of articles. The decimal system consists of placing in nine separate categories all phases of human knowledge. Each of these would be subdivided into another nine.

This was followed by the reading of a paper on the Question of Copyright by M. POUILLET, M. ROCHER, and Dr. DE MAURANS.

After a few words of discussion Dr. MARCEL BAUDOUIN followed with his paper on the Property of the Idea. A summary of both these papers was published in THE LANCET of July 21st last and therefore I need not refer to them again. As a result of the discussion that followed on the reading of these papers the Congress adopted a resolution to the effect that Article 7 of the Literary Convention of Berne should apply to the medical press. As for the property of the idea, after some discussion this complex question was referred to future congresses. After another and long discussion on the copyright of newspaper articles, a resolution was carried to the effect that newspaper articles, criticisms, &c., should not be quoted without mentioning the name of the author and the publication. With regard to the reproduction of lectures delivered before learned societies the general custom was to ask the professor

permission to print some account of what he had said, and as a rule such requests were not refused.

This concluded the day's sitting and the members of the Congress were conducted to Professor Richet's laboratory, where they took wine together.

(To be continued.)

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6531 births and 4313 deaths were registered during the week ending July 28th. The annual rate of mortality in these towns, which had increased from 14·5 to 16·4 per 1000 in the three preceding weeks, further rose to 19·4 last week. In London the rate was 21·0 per 1000, while it averaged 18·3 in the 32 provincial towns. The lowest death-rates in these towns were 11·1 in Derby, 11·4 in Bolton, 11·5 in Huddersfield, and 11·6 in Bristol; the highest rates were 22·0 in Leeds, 22·1 in Sheffield, 24·1 in Salford, and 28·0 in West Ham and in Liverpool. The 4313 deaths in these towns included 944 which were referred to the principal zymotic diseases, against 427 and 555 in the two preceding weeks; of these 662 resulted from diarrhœa, 88 from whooping-cough, 76 from measles, 66 from diphtheria, 27 from "fever" (principally enteric), 24 from scarlet fever, and one from small-pox. The lowest death-rates last week from these diseases occurred in Wolverhampton, Bristol, Burnley, and Gateshead, and the highest rates in West Ham, Liverpool, Salford, Leeds, and Sheffield. The greatest mortality from measles occurred in Brighton, Swansea, Derby, and Huddersfield,; from scarlet fever in Blackburn; from whooping-cough in West Ham and Sheffield; from "fever" in Portsmouth; and from diarrhœa in West Ham, Liverpool, Salford, Leeds, and Sheffield. The 66 deaths from diphtheria included 27 in London, 10 in Leicester, six in Sheffield, five in West Ham, and four in Leeds. One fatal case of small-pox was registered in Blackburn, but not one in any other of the 33 towns. The number of small-pox patients in the Metropolitan Asylums Hospitals, which had been 17, 17, and 14 at the end of the three preceding weeks, had further declined to 11 on Saturday last, July 28th: three new cases were admitted during the week, against four, four, and one in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 1859, against numbers increasing from 1754 to 1877 on the seven preceding Saturdays; 207 new cases were admitted during the week, against 229, 208, and 222 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 160 and 169 in the two preceding weeks, further rose to 196 last week, and were 19 above the corrected average. The causes of 54, or 1·2 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Bradford, Hull, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, Manchester, and Newcastle.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·2 and 19·0 per 1000 in the two preceding weeks, declined again to 17·5 during the week ending July 28th, and was 1·9 per 1000 less than the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 10·6 in Leith and 13·0 in Dundee to 18·9 in Glasgow and 19·3 in Paisley. The 541 deaths in these towns included 36 which were referred to diarrhœa, 24 to measles, nine to scarlet fever, nine to whooping-cough, six to "fever," two to small-pox, and one to diphtheria. In all 87 deaths resulted from these principal zymotic diseases, against 73 and 102 in the two preceding weeks. These 87 deaths were equal to an annual rate of 2·8 per 1000, which was 1·4 per 1000 below the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of diarrhœa, which had been 23 and 38 in the two preceding weeks, declined again last week to 36, of which 23 occurred in Glasgow and six in Aberdeen. The deaths from measles, which had been 17 and 18 in the two preceding weeks, further rose to 24 last week, and included 18 in Glasgow and five in Edinburgh. The fatal cases of scarlet fever, which had been seven and five in the two preceding weeks, rose again last week to nine, of which five were registered in Glasgow and three in Paisley. The deaths from whooping-cough, which had been 21 and 22 in the two preceding weeks, declined to nine last week, and included eight in Glasgow. The six deaths referred to different forms of "fever" showed a decline of five from the number in the preceding week, and included three in Glasgow and two in Dundee. The fatal cases of small-pox, which had been two, one, and two in the three preceding weeks, were again two last week, and were both recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 71 and 80 in the two preceding weeks, declined again last week to 67, but slightly exceeded the number in the corresponding period of last year. The causes of 31, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 17·8 to 23·4 per 1000 in the three preceding weeks, declined again to 18·3 during the week ending July 28th. During the past four weeks the death-rate in the city has averaged 19·4 per 1000, the rate during the same period being 16·2 in London and 17·2 in Edinburgh. The 123 deaths belonging to Dublin registered during the week under notice showed a decline of 34 from the number in the preceding week, and included five which were referred to the principal zymotic diseases, against six, eight, and 13, in the three preceding weeks; of these, four resulted from diarrhœa, and one from diphtheria. These five deaths were equal to an annual rate of 0·7 per 1000, the zymotic death-rate during the same period being 4·7 in London and 1·3 in Edinburgh. The fatal cases of diarrhœa, which had been two, one, and four in the three preceding weeks, were again four last week. The mortality from diphtheria also corresponded with that in the preceding week. The 123 deaths in Dublin last week included 24 of infants under one year of age and 33 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed a slight decline from the numbers recorded in the preceding week. Four inquest cases and four deaths from violence were registered; and 39, or nearly a third, of the deaths occurred in public institutions. The causes of five, or more than 4 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

AFFAIRS IN CHINA.

ALTHOUGH there is every reason to hope that our worst fears regarding the Legations at Peking have not been realised up to the present time it is clear that an advance on the part of the Allied Powers will have to take place—if, indeed, it has not already begun. The undertaking is a large and formidable one both in its political and its military aspects. The task of taking part in it has occurred at an unfortunate time for this country, which is already occupied with a big war elsewhere. The Indian contingent is, as we have already said, accompanied by field hospitals, hospital ships, and medical establishments from India, and a number of medical officers from the fleet will, no doubt, be available to take part in the expedition, together with some officers of the Royal Army Medical Corps serving with the troops in China. As regards the German force, it will probably be accompanied by a large medical contingent, as any number of medical officers and members of the civil medical profession are available in that country for army requirements. We shall see how the Germans, Russians, and other Powers who are not embarrassed by having any other war in hand, manage to carry out the medical part of the forthcoming campaign in China, especially as, probably for the first time in their experience, they will have to convey their troops there by sea transport.

THE SUPPLEMENTARY ARMY ESTIMATES.

The Army Medical Service formed the subject of a good deal of discussion on the occasion of the House going into

Committee of Supply on the Supplementary Army Estimates. There is, however, no need to go over all the ground again at the present time, because our readers are already familiar with most of the points that were raised. It is well known that the strength of the medical establishment was dangerously low at the outbreak of the present war in South Africa and that it had to be reinforced by the employment of a large number of civil surgeons. Moreover, the occurrences in China, the West Coast of Africa and elsewhere, have vastly increased the demand for medical officers in the public services at the present time. It is only fair to say, however, that the present Secretary for War did much more than his predecessors had done to restore the popularity of the service, but whether it were owing to want of time or from other causes these measures have not so far been productive of the effect anticipated. As the matter stands at present the whole subject of the organisation of the army medical services and the provision of an independent medical transport and a large medical reserve will have to be taken up and most carefully considered at the close of the present war in South Africa.

THE SOUTH AFRICAN COMMISSION.

It would, of course, be premature and improper to discuss the subjects under investigation by the Commission, but we may nevertheless advert to the published evidence given by one of the invalided soldiers at Netley. His testimony has, of course, no pertinence or weight in regard to what was alleged to have taken place elsewhere and outside his own experience, but it exhibits such a fine type of soldierly qualities that it is well worthy of being recorded in our columns. "No. 7. Had been in the Indian Mutiny, China, and Abyssinian wars, and left New Zealand as a volunteer, paying his own expenses, and joined the local forces. Wounded in the spine at Paardeberg. Never was more surprised in his life than when he went down to the field hospital and found the comfort and provision which were made for the sick and wounded. Only one in a hundred made any kind of complaint, and those ought to take their mothers with them wherever they went."

AN UNDESIRABLE MEMBER OF THE ROYAL ARMY MEDICAL CORPS.

A youth aged 18 years, named Arthur Deighton, charged with violently assaulting the police, was sent to prison by Mr. Bros from the Clerkenwell Police-court on July 31st for 21 days. After some disorderly conduct he was arrested by a police constable, but six members of the force and a civilian were required to take him to the station. The prisoner, who wore an old khaki uniform, said that he belonged to the Royal Army Medical Corps, that he had been invalided home from South Africa, and that he was now on furlough. If this statement be unfortunately true we can only regret that such a person should ever have been admitted to the Royal Army Medical Corps. But if he is a member the authorities will no doubt see that he has no further opportunity of disgracing it.

DEATHS IN THE SERVICES.

Deputy Inspector-General Rinso Robert Siccama, M.R.C.S. Eng., L.S.A., R.N. (retired), on July 19th. Mr. Siccama received his medical education at King's College Hospital, London, and qualified M.R.C.S. and L.S.A. in 1857. He shortly afterwards entered the Royal Navy as a surgeon and retired some years ago with the rank of deputy inspector-general of hospitals. After his retirement he settled in Bath and soon made himself very popular. Taking an interest in municipal matters he represented the Landsdown Ward in the Bath city council. Recently he resigned his seat and went to Weymouth for the benefit of his health, where his death took place. Much regret is felt in Bath at his decease.

TRANSVAAL WAR NOTES.

The following steamships have arrived at Southampton: the *Nubia* on July 25th, the *Aurania* on July 26th, and the *Manchester Port* on July 28th. They brought respectively 272, 620, and 313 sick and wounded men from South Africa who were admitted to the wards of the Royal Victoria Hospital, making a total of 1205 admissions in four days.

Dr. A. Conan Doyle and Professor A. Ogston arrived in England on July 27th from South Africa.

Correspondence.

"Audi alteram partem."

"ADDISON'S DISEASE AND LEUCODERMA."

To the Editors of THE LANCET.

SIRS,—Writing, as I do, away from my notes and references, I shall not do more than reply as shortly as possible to the important communication of Sir Samuel Wilks in THE LANCET of July 28th. I am sincerely glad, however, that he has at length broken the silence which I inferred from my previous attempts to "draw" him that he preferred to maintain. For I need scarcely add that, apart from personal regard for him, which is that of all his friends, all the world will join with me in holding that if any point about Addison's disease can really be settled by authority Sir Samuel Wilks is the one living authority on the subject.

But a "law of nature"—or an "apparent exception" thereto (I fully accept the implication here implied)—cannot be dogmatically disposed of by mere authority. It is not because Newton wrote the "Principia" that we accept its conclusions or believe even in the law of gravitation. And it may be permitted to me to maintain, in the face of Sir Samuel Wilks's opinion, that the relation of leucoderma to Addison's disease is not settled by anything he has written upon the subject up to now. But his last communication to you unquestionably tends to clear the position, and I hope this imperfect reply will do so still more. I am not, indeed, disposed to admit (and I doubt whether it is intended to be conveyed) that in my lecture to the Medical Graduates' College I attributed to Sir Samuel Wilks any views that he does not in point of fact hold. If there is anything to be regretted, in my opinion, it is that he has been led by his attitude in this communication into even seeming to affirm that the continuity of the pigmentation—the "uniform staining of the skin"—in Addison's disease is to be regarded as a "law of nature." That in the very great majority of the cases the pigmentation is continuous, as Addison, Wilks, and Greenhow all describe it, is not (so far as I know) disputed. Indeed, it has occurred to me to have to demonstrate cases of Addison's disease to clinical classes in which there were present natives of India, and I have been restrained only by personal considerations from pointing out in words the very exact resemblance of the tint in the patient to that of the members of the class aforesaid But vitiligo (apart from Addison's disease) is generally reputed to be much more common in the dark races than among Europeans; and, if so, why should it not also appear among the accidents (if we may so call them) of the Addisonian pigmentation? Furthermore, if Dr. Radcliffe Crocker is right (but I am citing him only on the basis of a casual conversation) in supposing that a previous darkening of the integument is usually or always a first stage in vitiligo (or leucoderma), there is probably some "law of nature" connecting the two states which demands more investigation than has yet been given to it even by Sir Samuel Wilks. I do not, therefore (as at present advised), feel disposed even on Sir Samuel Wilks's great authority to accept the dictum that in the true Addison's disease there shall absolutely *not* be found an instance of leucoderma, and that Addison's own illustration to the contrary is "a false representation."

Now as regards this classical and much controverted instance in Addison's own book. It is true that there was no post-mortem examination in that case as there delineated, but Sir Samuel Wilks has not adverted to a fact (which I noticed in my lecture) that Addison records this case side by side with another in which there was an examination, and where the capsules were found diseased, but in which no drawing could be procured; and certainly no doubt existed in Addison's mind at that time that the two cases were exactly parallel in every respect both as regards the skin and where the condition of the adrenals. Personally, I see no reason to doubt that Addison adhered to his judgment of this case, or to presume that he would in a second edition have relegated it to the category of "those doubtful instances which have done so much to retard the progress of the discovery." But of course it is open to Sir Samuel Wilks, or to anyone else, to doubt this case. In fact, I only alluded to the apparent discrepancy of opinion on this as "a point requiring to be more carefully dealt with."

As regards my own case, however, very briefly alluded to in the Transactions of the International Medical Congress (London, 1881) and afterwards published by Dr. McCall Anderson, I cannot quite submit to allow its relevancy to be brought into question on the grounds stated. It is true that I gave no extended description of the case, for I had no cognisance of it except at the one visit in consultation. But I affirm now with the utmost confidence: (1) that the disease was recognised during life both by myself and Dr. Maclaren of Glasgow as having all the constitutional symptoms of Addison's disease; (2) that this was confirmed later by Dr. McCall Anderson, who had at an earlier stage regarded the pigmentary changes as vitiliginous (as indeed they assuredly and typically were); and (3) that the examination after death made by the late Dr. Foulis of Glasgow in full knowledge of the diagnosis, and with every possible care as regards histological details revealed exactly the state of the adrenals regarded by Sir Samuel Wilks himself as characteristic of Addison's disease. I am not concerned at present with the other elements of doubt cast on Addison's observations, but I venture to continue in the belief that the "law of nature" alluded to by Sir Samuel Wilks as regards the continuity of the pigmentary change will have to submit to some further "apparent exceptions" before we can be considered as having quite done with the subject.

I am, Sirs, yours faithfully,

Penmaenmawr, N. Wales, July 30th, 1900. W. T. GAIRDNER.

"RODENT CANCER OF THE CORNEA."

To the Editors of THE LANCET.

SIRS,—The "rare chronic creeping ulcer of the cornea" spoken of by Mr. Nettleship does not differ from the condition described in my case simply because it is one and the same thing. A reference to my article will show that I used the terms "rodent ulcer" and "rodent cancer" as interchangeable. The reasons for my assuming malignancy in the ulcer were: (1) age of patients (nearly always late middle life); (2) the raised sinuous undermined edge of the ulcer and its chronic course; (3) nothing but destruction of the growing edge by the cautery appears to be able to arrest the progress of the malady; and (4) the one pathological examination of which I can find any record is that of Schmidt-Rimpler who describes appearances not inconsistent with malignancy. Perhaps the most suggestive points about Mr. Nettleship's "chronic creeping ulcer" are that lymphatic glands are not invaded; that the condition remains local; and, above all, that it does not recur after complete removal. These are cardinal features of the cutaneous rodent ulcer, which is nowadays admitted on all hands to be carcinomatous. They were present in my mind when I spoke of the condition as "rodent cancer of the cornea," although we must all admit that at present the etiology of the disease is a matter of speculation. Mr. Nettleship speaks of the "chronic creeping ulcer of the cornea" as "somewhat rare," whereas in my original article I called it "one of the rarest affections of the eye." My reasons were: (1) not a single identifiable case can I find either in periodical English literature or in the Transactions of the Ophthalmological Society of the United Kingdom; (2) during the last 10 years there appear to have been only five recorded cases—namely, four by Dufour (Société Français d'Ophtalmologie, May, 1897), and one by Schmidt-Rimpler (*Archiv für Augenheilkunde*, 1898); and (3) Vossius, in Giessen, saw three cases among 25,000 ophthalmic patients and Jany of Breslau one only among 66,000. On these grounds I based my conclusion that "rodent ulcer of the cornea" was an extremely rare affection.

I am, Sirs, yours faithfully,

Welbeck-street, W., July 30th, 1900. SYDNEY STEPHENSON.

To the Editors of THE LANCET.

SIRS,—The assumption that Mr. Sydney Stephenson's interesting case of corneal rodent ulcer, published in THE LANCET of July 21st (p. 173), was cancerous must have been felt by many ophthalmic surgeons who read the account to be "not proven," and I note that Mr. Edward Nettleship has given expression to his doubts on the matter and asks for further proof. I am very interested in the point, as I have quite recently had under my care the healthy little and not quite three-year-old daughter of healthy parents, living in a most salubrious neighbouring seaside town, where the father is a medical man, with a state of things, as far as can be judged from the description and diagram, identically the same as in Mr. Stephenson's case, except that the upper part of the cornea was attacked. The condition is so rare, at least in these parts, it being the only case which I have encountered in a period of 11 years, that it was not until the ulcer went on steadily advancing in spite of all the usual remedies that I had the child put under chloroform, and after a thorough examination, which I could not make before, recognised the grave nature of the case, when careful scraping and the energetic single application of pure carbolic acid, spudding it well in under the epithelium of the advancing edge, quite arrested the disease and led to a complete cure without causing so much destruction of tissue as the actual or galvano-cautery would have done. Clinically this case appears to me exactly the same as Mr. Stephenson's. Would he in my three-year-old patient consider it cancerous? Was it the age of his patient that led him to adopt this view of its nature, or what? A critique of Ulcus Corneæ Rodens appeared in the *Ophthalmic Review* for April of this year.

I am, Sirs, yours faithfully,

Norwich, July 29th, 1900. S. JOHNSON TAYLOR.

THE CURATIVE TREATMENT OF MICROBIC DISEASE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 20th, 1890 (p. 1354), there appeared a letter of mine entitled "On Immunity from Infectious Disease." In this letter I proposed a method of treating infectious disease by (1) bleeding the patient in order to remove some of his vitiated blood and (2) replacing this blood by healthy blood obtained from an individual who had recovered from the same disease as the patient was suffering from. This method, as far as I am aware, has not been tried on the human subject. It has, however, been tried in Cape Colony on cattle suffering from rinderpest some two years ago and with great success. The treatment to be successful depends on a very thorough bleeding of the sick animal, in a full-grown ox to the extent of several (five or six) litres; on the other hand, the inoculating dose of defibrinated blood or serum from a recovered animal need not exceed from 20 to 30 cubic centimetres in the case of a "fortified" animal, or 100 cubic centimetres if the animal be not fortified. I think the method may be now tried on the human subject in pneumonia and other acute fevers where in the olden days bleeding was usually resorted to, with this addition, that immediately after the bleeding a dose of curative serum (anti-pneumonic, &c.) should be given, and to avoid all risks subcutaneously, instead of the method I proposed in my letter—viz., by transfusion. Perhaps in a case of typhus or typhoid fever, where the blood-giver is the human subject, direct transfusion of the "recovered" blood may be the safest procedure.

I am, Sirs, yours faithfully,

GEORGE CARRINGTON PURVIS, M.D., B.Sc. Edin.

Grahamstown, Cape Colony, July 7th, 1900.

"RUPTURE OF THE APPARENTLY HEALTHY ŒSOPHAGUS."

To the Editors of THE LANCET.

SIRS,—Dr. E. J. McWeeney's interesting paper on the above subject, published in THE LANCET of July 21st (p. 158), does not mention a table of 18 such cases which was appended to a paper by Dr. R. L. Bowles and myself sent in November, 1899, and read on March 27th of this year before the Royal Medical and Chirurgical Society and now published in its Transactions, p. 241. On analysing his table of 17 cases I find that Dr. McWeeney rejects two cases of Mr. Stanley Boyd's which we accepted. He tabulates one case rejected by Fitz which we did not include, but which perhaps it seems reasonable to accept. He does not include, as we did, Oppolzer's case, but mentions it with those of Williams, Bailey, and Heyfelder "as almost certainly belonging to this category." Two cases are in his tables in which an "ulcer" is described and are not included in our table. He does not mention three cases of Dr. S. West, of Dr. C. J. B. Williams, and of Guersent which are in our table. He adds cases by Harrison and Wolf

and three (published since the compilation of our table) by himself, Heintze, and Lorrain Smith. Taking the 18 cases in our table and those added by him, five in all, and putting in those accepted by him but rejected by us (in two of these the word "ulcer" has led to confusion), the total number of all cases would seem to be about 25, a number sufficient to show, as Dr. Bowles and I contended in our paper, that this injury is not so rare as is commonly thought to be the case.

I am, Sirs, yours faithfully,

Half Moon-street, W., July 30th, 1900. G. R. TURNER.

"PADDLING IN THE SEA."

To the Editors of THE LANCET.

SIRS,—The letter of Mr. William Knight Treves on the above topic in THE LANCET of July 21st states that "for some reason or other paddling is very generally condemned by the medical profession." Presuming that Mr. Treves has good grounds for making such a statement—and I confess that I was not aware of such a prejudice—I cannot understand on what grounds paddling can be considered objectionable. The extensive sands of the Dee estuary are greatly resorted to by children of all ages for the express purpose of bathing and paddling, but principally for the latter delightful enjoyment. We have here, too, one of the largest preparatory boys' schools in England, the pupils of which school constantly go long paddles. I have therefore much pleasure in adding my testimony to that of Mr. Treves that paddling is not only delightful but beneficial to all children through the summer weather. My wish to help Mr. Treves in doing a "good turn to the children" is based not only on the experience gained as a medical man but also as a parent. It is usually the bad eating habits of children, not paddling, that "sends the blood to the head," whatever that picturesque phrase may mean. I am, Sirs, yours faithfully,

H. M. SPEECHLY.

Parkgate on the Cheshire Dee, July 20th, 1900.

MEDICAL SERVICE IN THE HIGHLANDS AND ISLANDS OF SCOTLAND.

To the Editors of THE LANCET.

SIRS,—Herewith I enclose copy of reply received by me last night from the Local Government Board in reference to the memorial from medical officers of the more remote parishes of the Highlands and islands which was recently presented to the Board. You will see by it that the Board favour the proposal but have not the power to insist upon the parish councils granting the privilege. While I have no doubt that some parish councils would grant their medical officers a paid substitute, yet I fear we shall have to wait for an alteration of the Local Government (Scotland) Act before we can hope to see the reform general.

I trust you will kindly publish the reply, and am, Sirs,

Yours faithfully,

JAS F. D. MACARA,

Durness, Lairg, Sutherlandshire, July 27th, 1900. Medical Officer, Durness.

[COPY.]

Local Government Board, Edinburgh, July 25th, 1900.

SIR,—With reference to your letter dated 27th ultimo enclosing a memorial by the medical officers of the more remote parishes of the Highlands and islands of Scotland as to the difficulty experienced by them in obtaining an annual holiday, I am to say that this matter has received careful consideration from the Board. In reply I am to say that the Board desire to express their sympathy with the views expressed in the memorial, and having regard to the very special circumstances and conditions under which the duties of the memorialists have to be discharged are of opinion that it would be to the advantage of the public service that parish councils should grant an adequate holiday to their medical officers, defraying at the same time the cost of a substitute to act for the doctor during his absence. But, as the Board have often had occasion to point out, their powers in regard to the relation subsisting between parish councils and their medical officers are very limited, being derived solely through the medium of the grant in aid of medical relief to the conditions in connexion with the distribution of which parish councils are required to conform in order to participate. I am to add that the rules of the grant have been held to be stereotyped by the Local Government (Scotland) Act of 1889, so that, as will be seen, additional legislation would be necessary to give general effect to the views of the medical officers. The Board, however, direct me to say that they are prepared to do the best within their power—that is, they will offer no objection to the cost of substitute medical officers being ranked against the medical relief grant in the more remote parishes of the Highlands and islands of Scotland, provided that the local circumstances are such as are described in the memorial and provided care be taken that the parish council shall pay only for the services rendered by the substitute to the paupers and not for his services to the medical officers' private patients. The Board have forwarded a copy of this letter to Lord Lister.

I am, Sir, your obedient servant,

G. FALCONAR-STEWART, Secretary.

Dr. Macara, Durness, Lairg.

THE MEDICAL STAFF AND THE MANAGEMENT OF THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE.

To the Editors of THE LANCET.

SIRS,—In consequence of the appearance of an article in the *Times* of to-day we, the members of the honorary medical and surgical staff of the National Hospital for the Paralysed and Epileptic, Queen-square, now desire to address you on the crisis in the affairs of our hospital which has been brought about by the acts of the board of management during a number of years.

The relations between the medical staff and the board of management have shown increasing signs of strain for several years past, in proportion as the board has more and more relegated its functions and authority to the hands of a paid official, Mr. Burford Rawlings, who, from the position which he originally occupied as secretary, has been advanced to the dignity of "secretary and general director." Those practically acquainted with hospital affairs will scarcely need to be told that the effect of such an appointment is that although the management of the hospital may be nominally directed by a board the institution is practically, to a great and dangerous extent, in the hands of one man. That the autocracy of the office referred to should be as complete as possible it is enacted in the rules of the hospital that no member of the medical staff shall be allowed to have a seat on the board. The "secretary and general director" is thus relieved of any inconvenience which might possibly be occasioned by the presence on the board of persons professionally acquainted with the work and necessities of a medical institution and able to supply essential information and counsel.

It is not surprising, therefore, that for a number of years the medical staff have found that the administration of the hospital was becoming more and more unsatisfactory. Ten years ago, with the view of remedying this state of things, the medical staff suggested to the board of management that two of the medical officers should be annually elected members of the board (12 members) as their representatives. This was refused and various substitutes were proposed by the board which have proved failures owing to acts of the board. The first of these substitute arrangements was summarily terminated in 1893 by a decision of the board of management, no reason being assigned. The last of these arrangements came to an end in 1899 in consequence of a breach of faith on the part of the board of management. Since then the medical staff have renewed their claim for direct representation, which the board have persistently refused, and as a result a state of acute dissension between the two bodies has existed since the early part of last year. In July, 1899, the chairman of the Distribution Committee of the Hospital Sunday Fund warned the secretary and general director that unless the want of harmony ceased the customary grant would not be renewed in the following (this) year, at the same time expressing the opinion that the medical staff should be directly represented on the board of management. He also instructed the secretary director to communicate these observations of the committee to the board of management. We must here observe that the secretary director, Mr. Burford Rawlings, in reporting to his board did not communicate the whole of the instructions he had received from the chairman of the Sunday Fund Committee, but informed them that the chairman (Sir Sydney Waterlow) had "confined his observations to an expression of regret that perfect harmony did not exist between the board and the staff and the expression of the hope that this state of things would have passed away before next year."

Between the meeting of the Sunday Fund Committee last year and that held on July 19th the medical staff, after further fruitless negotiations with the board of management, determined to inform the governors of the hospital not only

of the defects of its constitution but also of certain administrative evils which had resulted therefrom. To this end the medical staff issued to those governors whose names and addresses could be discovered by them a statement and report of the condition of the affairs of the hospital. This report we enclose together with other documents. It should be noted that an application by the medical staff for a copy of the official list of the names and addresses of the governors was refused by the board of management. The next step was the appointment by the board of a sub-committee consisting of three of their own members to investigate the grave defects to which their attention had been called and for which they were responsible. The medical staff naturally at once repudiated such an unsatisfactory inquiry and urged upon the governors that any committee of investigation should be an independent one and not appointed by the body whose acts were called in question.

The final stage of this dispute was reached at the recent meeting of the Distribution Committee of the Hospital Sunday Fund. The Sunday Fund Committee, bearing in mind their instructions to the board of management of last year, issued this year a request to the board and medical staff respectively to send representatives to their meeting on July 19th.

After hearing both sides the Distribution Committee of the Hospital Sunday Fund adopted the following resolution for submission to their council:—

> In consequence of the serious dissensions between the staff and the board of management at the National Hospital for the Paralysed and Epileptic, Queen-square, your committee held a conference at which both were fully represented. After a long discussion it was decided that no award could be recommended until the existing differences had been satisfactorily arranged.

In conclusion, we desire only to reaffirm our view that the affairs of the hospital need a searching inquiry and its constitution thorough reform. We are unanimous in our resolve to put an end to the evils of the present system of administration. We are, Sirs, yours obediently,

J. HUGHLINGS JACKSON, M.D. St. And., F.R.C.P. Lond., F.R.S.,
THOMAS BUZZARD, M.D., F.R.C.P. Lond.,
Consulting Physicians to the Hospital.
R. BRUDENELL CARTER, F.R.C.S. Eng.,
Consulting Ophthalmic Surgeon.
H. CHARLTON BASTIAN, M.D., F.R.C.P. Lond., F.R.S.,
W. R. GOWERS, M.D., F.R.C.P. Lond., F.R.S.,
DAVID FERRIER, M.D. Edin., F.R.C.P. Lond., F.R.S.,
J. A. ORMEROD, M.D. Oxon, F.R.C.P. Lond.,
Physicians to In-patients.
CHARLES E. BEEVOR, M.D., F.R.C.P. Lond.,
HOWARD H. TOOTH, M.D., F.R.C.P. Lond.,
JAMES TAYLOR, M.D. Edin., F.R.C.P. Lond.,
J. S. RISIEN RUSSELL, M.D. Edin., F.R.C.P. Lond.,
Physicians to Out-patients.
W. ALDREN TURNER, M.D. Edin., F.R.C.P. Lond.,
FREDERICK E. BATTEN, M.D. Cantab., M.R.C.P. Lond., Assistant Physicians.
FELIX SEMON, M.D. Berlin, F.R.C.P. Lond.,
Physician for Diseases of the Throat.
VICTOR HORSLEY, F.R.C.S. Eng., F.R.S.,
CHARLES A. BALLANCE, F.R.C.S. Eng.,
Surgeons.
R. MARCUS GUNN, F.R.C.S. Eng.,
Ophthalmic Surgeon.
A. E. CUMBERBATCH, F.R.C.S. Eng.,
Aural Surgeon.

(The names of absent members have been added by authority.)

July 27th, 1900.

"THE APPOINTMENT OF SPECIAL MEDICAL OFFICERS FOR THE CERTIFICATION OF LUNATICS."

To the Editors of THE LANCET.

SIRS,—What Mr. Polhill Turner proposes in THE LANCET of July 28th is identical with what I proposed in a short pamphlet entitled "Proposals for the Amendment of the Laws relating to Lunatics and Habitual Drunkards," published in 1885. Many, if not all, of the anomalies now connected with the process of certification of lunatics would be obviated by the adoption of some such plan, and much benefit will accrue, not only to the public, but to the profession, if such a plan were to receive your powerful advocacy. Only those whose fate it is to have to do with lunacy certificates, both in their inception and in their completion, know how gladly a simplification of the process such as that proposed would be welcomed.

I am, Sirs, yours faithfully,

Hendon, July 31st, 1900. W. H. KESTEVEN.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

University College, Liverpool: The Work of the Medical Faculty.

THE medical faculty, which may be regarded as the foundation-stone of University College, continues to flourish. Professor A. M. Paterson, the Dean of the Faculty, in his recently-issued report for the past year remarked on steady progress in all departments. The number of students attending classes during the winter session of 1899-1900 (excluding those taking out hospital practice) was 194. In 1897-98 and 1898-99 the numbers were 169 and 188 respectively. There were 85 new entries, including 60 medical, 13 dental, and 12 entering for special courses. In the previous winter session there were 88 new entries—54 medical, 19 dental, and 15 for special courses. During the present summer session the total numbers have been 163, including 10 new entries and 16 for special courses. Last summer the total reached 144, including 12 new entries and five for special courses. These figures represent the largest numbers in the history of the medical school. The increase was mainly due to students taking special courses or parts of their medical curriculum. Professor Paterson elaborates the subject of buildings. Last year the plans of the new building were devised and passed. The scheme was divided for building purposes into three sections, which was necessitated through lack of funds. The first section, comprising an anatomical museum and dissecting-room, is now being erected. The second section will include, in addition to the main staircase, the laboratories for surgery and the lecture theatres. The third section, which will complete the block, will contain laboratories and smaller rooms necessary for teaching, investigation, and administration in the several departments of the school. Professor Paterson regrets that the surgical section of the building has not already been begun, as the completion of the old block would be expedited by the erection of that section. The estimated cost of the three sections is £30,000, towards which promises of £14 000 have been received. As each section of the building is estimated to cost about £10,000, a start will be made with the second section when the requisite sum of £6000 has been guaranteed.

Woolton Convalescent Institution.

The twenty-sixth annual meeting of the Woolton Convalescent Institution was held on July 21st. The institution is largely self-supporting; payments made on behalf of patients amounted last year to £1729 4*s.*, whilst the total receipts realised £4701 5*s.* 4*d.* Subscriptions amounted to £944 8*s.* 6*d.* The Hospital Sunday Fund contributed £315, the proceeds of the city ball amounted to £159 0*s.* 8*d.*, and during the year donations had been received amounting to £415 4*s.* The number of patients received into the institution was 2661, which was six short of the previous year, but showed 25 per cent. above the average for the past 10 years. The accounts showed an increase in the debit balance from £63 to £354, which was due to necessary alterations in the institution. The number of special subscriptions had increased and Mr. T. S. Timmis had endowed a free bed, bringing the number of free beds up to 20. The popularity of the institution is evidenced by the fact of the number of applicants for admission. In the year 1878 the number of patients was 638 and the annual subscriptions were £110, as compared with 2661 patients and £944 recorded for the past year. The grounds of the institution have been considerably improved at an expense of £1206, and the committee have spared no effort to make the institution comfortable and attractive. The Council in their report referred with great regret to the death of Sir Henry Tate, Bart., who had closely connected himself with the institution for many years, having been the honorary treasurer

in its early days and a liberal donor to its funds. A number of seats for the grounds were presented by the Lord Mayor, Sir William Tate, Bart., and Mr. S. S. Bacon. Complimentary references to the benefits of the institution were made by the Lord Mayor, Monsignor Nugent, Sir Henry Tate, and others.

Hospital Saturday and Sunday Funds: Distribution of Grants to the Charities.

The joint committees of the Hospital Sunday and Hospital Saturday Funds distributed the following amounts among the local charities:—Royal Infirmary, £2360; Royal Southern Hospital, £1950; Northern Hospital, £1690; Stanley Hospital, £910; Liverpool dispensaries, £780; Queen Victoria District Nursing Association, £780; Infirmary for Children, £780; Eye and Ear Infirmary, £520; Consumption Hospital, £455. A sum of £2080 was also distributed among minor charities, making a grand total of £12,805.

July 31st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Death of James Rodger, M.A., M.D. Aberd., of Aberdeen.

LAST week Aberdeen lost one of its best known medical practitioners, Dr. James Roger. The deceased was born in 1841 in Aberdeen, where his father owned the Gilcomston tanworks in Rodger's-walk. Dr. Rodger had a distinguished university career. In 1865 he graduated M.B., C.M., both with highest honours; and from 1865 to 1867 and from 1868 to 1871 he was demonstrator of anatomy at Aberdeen University under the late Professor Sir John Struthers. During the interval (in 1867 and 1868) he studied at Paris, Berlin, and Vienna. He volunteered his professional services during the Franco-Prussian war, in recognition of which (including the organisation of the Saarbrucken hospital) he received from William I. of Germany the war medal for non-combatants, and on his return to Scotland in 1871 he was awarded a money gratuity by the International Society for Aid to the Sick and Wounded in War. He was physician to Aberdeen General Dispensary from 1870 to 1876, and from 1869 for about 17 years he was pathologist to Aberdeen Royal Infirmary, of which he was, further, assistant physician from 1886 to 1897, being thereafter honorary physician. In 1874 he was appointed one of the examiners in anatomy, pathology, and medicine at Aberdeen University. He also held various other public appointments in his native city, such as physician to Robert Gordon's College; secretary, treasurer, and president in succession of the Aberdeen Medico-Chirurgical Society; and surgeon-lieutenant-colonel of the 1st Aberdeen Volunteer Artillery. He had a large private practice, consultant and otherwise, and though somewhat abrupt in manner, his geniality, general cleverness, and professional ability were widely recognised. Dr. Rodger married a daughter of the late John Hill Burton, historiographer royal for Scotland, author of "The Scot Abroad," "The Book Hunter," &c.; and one of the last acts of his life was to offer as gifts to Marischal College, Aberdeen Free Library, Aberdeen Art Gallery, &c., replicas of a noted bronze bust of his father-in-law.

July 31st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Water Supply.

LITTLE is being done among the learned societies of Paris just now, for all the active members are reserving their most interesting communications for the great International Congress of Medicine which is on the point of being opened and which absorbs everything. The Academy of Medicine is the only one where there has been an important discussion, and in this case the subject considered was one of general interest at the present time, being no other than the state of the Paris water-supply, which attracts attention regularly every year during the hot weather. The temperature has now become milder, but it was exceptionally high during the last fortnight, on one of the days of which there was the highest temperature of the century in Paris. The consumption of water naturally increased at once and even commenced to exceed the anticipations of the engineers, who announced last spring that precautions had been taken and that in consequence of the opening up of new sources of supply and the construction of new filtering beds the Parisians would never again be in want of water, even with the most extravagant waste and with the increase of the population during the Exhibition. The quantity provided for each inhabitant of Paris is, in fact, 230 cubic metres (50,620 gallons). Nevertheless, it soon became insufficient, as had to be admitted by the water company itself, which promptly posted up throughout Paris the notices with which it favours the public every year, warning Parisians to limit their consumption in order to prevent an early failure of the supply. It is undeniable that owing to the hot weather there is an excessive consumption of water. For the purpose of saving a penny-worth of ice, people do not hesitate to let the water run for hours in order that it may be cool for drinking. The first water which comes after the turning of the tap is in fact quite hot, because the service pipes are generally outside the houses and are heated all day by the sun. Ineffectual attempts have been made to compel the use of water taps which remain open only so long as a hand is on them. Small metal nuts with an internal screw are sold which enable the taps to be kept always open. But from what has just been said it will be seen that with the usual rate of flow from a tap even if it was open all day long only a small portion of the allowance of each inhabitant would pass through it. It is the water company itself which is the real offender. If the spring water were reserved solely for human consumption the quantity supplied would be ten times more than the population required, but in actual fact the water company uses this spring water for all purposes, for lifts, street-watering, &c., in all the high-lying districts where the Seine water cannot be supplied under sufficient pressure by means of the company's pumping machinery. The remedy would be to use more powerful pumps and to fit up all the houses with a double set of service pipes, one for spring water and one for Seine water, but the company prefers not to incur the expense which would fall upon it alone. By its agreement with the city of Paris the water company is not required to provide pipes, mains, or machinery, the water being supplied to the company free of charge by the city, which undertakes the collecting of it and the construction of the means of conveyance. It is easy to understand that from motives of economy the company prefers to make general use of spring water which is delivered naturally at a sufficient pressure, rather than to erect costly machinery for raising Seine water to the requisite height and to provide a separate service for it in each house. This is the real difficulty of the question. At last the Academy of Medicine has intervened. The company having stopped the supply of water during the night in order to allow the reservoirs to become full everybody complained, especially the fire brigade—the latter on the ground that fires generally broke out at night and that the pressure of the water was insufficient for the fire engines. M. Laveran and M. Henriot opened a discussion in the Academy on this subject, and proposed the following motion which was passed unanimously:—

The Academy of Medicine feels itself compelled to call the attention of the public authorities to the state of the Paris water-supply which is at the present time quite inadequate. The Seine water not being at sufficient pressure is in certain localities replaced by spring water being used for washing purposes. If there was a proper supply of Seine water there would be no deficiency of spring water for human consumption.

The Academy also passed the following motion:—

A double service for spring water and for Seine water ought to be established everywhere, so that they may be kept quite separate from one another.

The Prohibition of Spitting.

Some days ago announcements to the following effect, printed on small white bills (the official colour), were to be seen on the walls of the public buildings everywhere in Paris:—

NOTICE.—In the interests of public health and with the view of checking the spread of tuberculosis persons are requested not to spit on the ground ("*par terre*").

This was the result of a resolution of the municipal council and of a discussion on a report presented by M. Fortin last March. As might be expected some journals complained, saying that spitting in omnibuses, tramcars, and railway carriages had been already prohibited, and asking where people might spit if they must not spit on the ground. The

object of the notice, however, was only to discourage spitting on the pavement ("*sur les trottoirs*") and not in the roadway.

July 31st.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Diseases of the Philippines.

AN interesting paper was read recently before the Southern Idaho Medical Association by Dr. W. D. Springer of Boise in that State, who served as surgeon of the Idaho Regiment in the Philippines. He said that among the troops malaria, small-pox, typhoid fever, dysentery, tropical diarrhœa, intestinal parasites, and skin diseases were the most common maladies. Typhoid fever prevailed on an extensive scale, but amœbic dysentery was the most frequent and fatal disease. A complaint known as "Manila itch," "Dhobie itch," or "Filipino itch" was the most common of the skin affections. This is of parasitic origin and peculiar to the tropics. It spreads very rapidly during the hot, damp season. It attacks first the perineal region and the axilla. After the acute stage is over and the inflammation is somewhat subsided scales rub off and the inflammation gets down about the feet, where it spreads. The burning and itching are much worse at night, and cause much suffering. The patient unconsciously scratches the part affected, and this in many cases causes boils. The regions occupied by the disease always remain pigmented. This trouble was almost universal among the troops. Small-pox, Dr. Springer stated, prevailed all the year in Luzon and the troops suffered severely from it. The report of the Surgeon-General attributed over 200 deaths to this cause. Dr. Springer, however, drew attention to the fact that where vaccination was carefully practised and reliable lymph was used small-pox was absent, and he was of opinion that both its prevalence and its mortality were owing to the carelessness shown in performing the operation and the inferior quality of the vaccine lymph.

Public Baths in the State of New York.

There has been some difference of opinion recently as to who is entitled to the chief credit for the establishment of free public baths in the State of New York. This honour has been claimed in several journals by the Hon. Goodwin Brown. The *Medical Record*, however, took up the cudgels for Dr. Simon Baruch and proved fairly conclusively that this good work was first commenced on his suggestion. The *New York Herald* of October 25th, 1891, referring to the opening of some baths built by funds supplied by Baron Hirsch, says, "These rain baths are something entirely new for this country. Attention was first called to this system of baths in this country by Dr. Simon Baruch. Dr. Baruch spent six months in Europe studying the baths of all foreign nations. On his return he brought the subject before the Academy of Medicine and headed the rapidly-growing movement for public baths." The report of the committee on public baths appointed by the Mayor of New York, transmitted to the Legislature on March 25th, 1897, was that out of 480 houses visited only 17 had baths and only three houses of each 100 had bath-rooms and that there were only three public baths in the city of New York. The Bill, which became law in 1895 and for which the Hon. Goodwin Brown was mainly responsible, reads as follows: "All cities of the first and second class shall establish and maintain such number of free public baths as the local board of health may deem to be necessary." This is the first general legislation on the subject ever enacted in the United States and the first bath erected under its provisions was opened in Buffalo in January, 1897. It has a capacity of 1000 baths daily and cost $8000 (£1600). In Rochester a bath has been erected to all intents and purposes on similar lines to that of Buffalo at a cost of $5000 (£1000). In Albany the money has been appropriated, and plans prepared, for a bath in that town the cost of which will be $22,000 (£4400). In Greater New York the first public bath is nearing completion and is likely to be opened in the course of a month or so. It is situated on the water front in a crowded part of the city, and will cost $100,000 (£20,000). It will have a capacity of 3000 baths per day—one-third each for women, men, and boys. The United States is very many years behind most European countries so far as free public baths are concerned. The following cities contain public baths:—Boston, Chicago, Yonkers, New York, Brookline (Mass.), Providence, Philadelphia, Worcester, Buffalo, and Rochester. In a country, therefore, which contains upwards of 80,000,000 people, there are only about a dozen cities that provide bathing facilities. The health authorities seem to be becoming impressed with this lack and probably in the course of a few years the United States will be as well equipped with public baths as are countries on the other side of the Atlantic.

The Disinfection of New York.

An anti-germ crusade has recently been carried on by the active Board of Health in this city. An appropriation of $20,000 (£4000) was recently made to the Board of Health for the purpose of cleansing the unsavoury districts of New York. Probably the occurrences in the Chinese quarter of San Francisco impelled the authorities of New York to set their house in order and to run no risk of the plague or any other infectious disease gaining a foothold there. At any rate, be the cause of the action what it may, the proceeding can have none but good effects, and the activity of the New York Board of Health is a useful object-lesson to such bodies everywhere. The sanitary condition of New York, as proved by its vital statistics, has improved to a wonderful degree within the past few years. For this the chief credit is due to the Board of Health.

July 14th.

Obituary.

JOHN STUART STEVENSON, M.R.C.S. ENG., L.R.C.P. LOND.,

CAPTAIN, INDIAN MEDICAL SERVICE.

In THE LANCET of July 28th we announced the sudden death of Captain J. S. Stevenson of the Indian Medical Service. A further telegraphic message has now conveyed the news that this promising young officer fell a victim to heat apoplexy at Lucknow on Friday, July 20th.

John Stuart Stevenson was born at Benares on August 24th, 1872, where his father was stationed as the medical officer of a battery of Royal Artillery. He was educated at St. George's College, Croydon, matriculated at the London University, was entered as a student at St. Bartholomew's Hospital, and became a Member of the Royal College of Surgeons of England and a Licentiate of the Royal College of Physicians of London in 1895. In the spring of 1896 he took the fifth place among 17 selected candidates for the Indian Medical Service, and passing through the Army Medical School in the summer session of that year was duly gazetted as a Surgeon-Lieutenant on July 29th. Within three months of his arrival in India he was appointed to do duty on the railway as an examiner to prevent the spread of the plague in the north of India. Few men of his years had such opportunities of studying this disease, for he was subsequently sent to Bangalore on plague duty, and last year he was sent to Mauritius as "special plague officer," a position which he occupied with great credit for about a year. While at Mauritius he volunteered for active service in South Africa, but his services could not be spared. When the plague was stamped out in Mauritius and he returned to India he was appointed to the important post of deputy-sanitary-commissioner of the North-West Provinces—a post which he had held for a brief period when he so suddenly passed away. Captain Stevenson was a general favourite in society and won considerable reputation while in the Mauritius for the careful way in which he carried out the very important charge committed to him. He served on the North-West Frontier of India in 1897-98, when he was with the Tirah force and in the operations in the Mamund country, for which services he received the medal and clasp. He was duly promoted to be a captain on July 29th, 1899, and was considered to be one of the most rising young officers of the service. He was the only son of Surgeon-General W. F. Stevenson, now with Lord Roberts in the Transvaal, who at the opening of the war was taken from his appointment of professor of surgery in the Army Medical School, Netley, and sent out to South Africa as principal medical officer on the line of communications in Cape Colony and consulting surgeon to the forces. To him who in the midst of an arduous campaign has now to face this great sorrow and to the other members of the family we offer our heartfelt sympathy.

THE BRITISH MEDICAL ASSOCIATION.

MEETING AT IPSWICH.

THE sixty-eighth meeting of the British Medical Association was opened at Ipswich on Tuesday, July 31st, under the presidency of Dr. William Alfred Elliston, senior surgeon to the East Suffolk and Ipswich Hospital. This is the first occasion upon which the Association has met at Ipswich.

Ipswich, although it cannot lay claim to the ancient history and natural beauties of Edinburgh or to the naval and military importance of Portsmouth, has nevertheless peculiar interests of its own. It will always be remembered as being the birth-place of Cardinal Wolsey, of whose connexion with his native town a sad memorial remains in the crumbling Wolsey Gateway—all that is left of the demolished college with which Wolsey intended to endow Ipswich. Less fortunate than its founder's other great educational establishment at Oxford, it fell into the same rapacious hands which so nearly destroyed St. Bartholomew's Hospital.

The streets of Ipswich are narrow, yet they are singularly clean and well kept, while there still remain many beautiful examples of old domestic architecture. Perhaps the most notable is the "Ancient House," dating from 1567, though the ornamentation, we should fancy, was somewhat later, as it is distinctly Jacobean in style. Another striking building is the Neptune Inn. Christchurch Mansion, a fine old Elizabethan house, together with its park, now belongs to the town.

The systems of water-supply and drainage of Ipswich are worthy of note. The water is derived from chalk at some considerable depth and hence in quality is similar to that of the Kent Company's wells. At present there is practically little adopted in the way of actual purification of the sewage. What is done is that the sewage is screened at the outfall and after some attempt at precipitation is allowed to flow into the river Orwell without further treatment. The district, of course, is very flat and somewhat unfavourable to satisfactory sewage disposal. Indeed, the Stoke and Marsh districts are too low for connexion with the main drainage system which depends upon gravitation. Consequently recourse is had to the Shone pneumatic system which is applied in conjunction with the Hermite process of treating sewage with electrolysed salt water. The salt water of the estuary of the Orwell affords an abundant supply of material for this purpose. The streets of the town appear to be well kept and the reproach of being "smelly" which was at one time levelled against Ipswich and its thoroughfares has been removed.

Dr. William Alfred Elliston, the President-Elect, gave a dinner on Monday evening, July 30th, to the members of Council, the presidents of sections, and others. The following were among the guests: the Lord Bishop of Norwich, the Lord Lieutenant of Suffolk, the High Sheriff of Suffolk, the Mayor of Ipswich, Dr. Dawson Williams (the Editor of the *British Medical Journal*), and Dr. H. P. Cholmeley (representing THE LANCET). There were only two toasts, that of "Her Majesty the Queen" and that of "The Colonial Members." To the latter Professor T. G. Roddick of Montreal, whose name had been coupled with the toast, replied. On the afternoon of the same day Mrs. Elliston received, at Stoke Hall, the members of the Local Committees and such members of the Association as had arrived in Ipswich.

The space devoted to the Annual Museum was somewhat scattered, though this fact afforded an excellent opportunity of dividing the exhibits into distinct classes. What is known as the Public Hall in Westgate-street was set apart for the display of food and food products, drugs and mineral waters, while the old museum rooms close by were devoted to the exhibition of surgical instruments, hospital appliances, aseptic furniture, &c. The Public Hall admitted of a more artistic arrangement of the exhibitors' stalls than was possible in the Drill Hall at Portsmouth last year or at Edinburgh in the previous year. The exhibitors, indeed, must have found it a welcome change to have been able to place their exhibits in a structure having no glass roof with the hot sun's rays playing upon it and possessing some pretence at design instead of that rectangular precision of the average drill hall, which has been provided on previous occasions.

From the point of view of structure the Public Hall in Westgate-street may be regarded as resembling the Queen's Hall in London, having a gallery and orchestra-platform. At intervals a selection of music was provided. Despite the ample space afforded the Exhibition was decidedly on a small scale when compared with those of previous years. One very notable and commendable advance in the direction of accommodation was the provision of seats between the rows for the visitors and a smoking lounge. The stalls were on the whole tastefully arranged and were practically ready for inspection on Tuesday, though the attendance on that day was somewhat meagre. We may repeat what we said on the occasion of last year's meeting that the Organising Committee might make this feature of the annual meeting more attractive and interesting to the members by including amongst the exhibits a selection of a really scientific and instructive character. At present it may be said that demonstrations of the x rays are the only things laying claim to this description.

In another column will be found the first contribution of a special account of the exhibits at the annual museum, for which purpose the order of treatment adopted in previous years will be retained as being on the whole the most convenient. This is as follows:—1. Drugs. 2. Foods and food products. 3. Sanitary appliances, disinfectants, &c. 4. Surgical instruments and appliances. 5. Mineral waters and beverages. 6. Publications. 7. Miscellaneous.

St. Mary-le-Tower was appointed as the church for the opening service, and at 11 A.M. on Tuesday the edifice was filled with a congregation composed of the members of the Association and their friends, amongst whom were a great number of ladies. The order of service was appropriate to the occasion and the Lord Bishop of Norwich, the Right Rev. John Sheepshanks, delivered a somewhat long discourse, in which the peroration was the most impressive feature. The text was the oft used one from the uncanonical book of Ecclesiasticus (chap. xxxviii. verses 13 *et seq.*):

> "Honour the physician with the honour due unto him, for the use ye may have of him; for the Lord hath created him.
> For of the Most High cometh healing, and he shall receive honour of the king.
> The skill of the physician shall lift up his head, and in the sight of great men he shall be in admiration.
> The Lord hath created medicines out of the earth, and he that is wise shall not abhor them."

The musical service was admirably rendered as it was tastefully appointed. The offertory was, as on previous occasions, devoted to the British Medical Benevolent Fund and we learn that the proceeds amounted to 20 guineas.

The corporation of Ipswich was represented by the mayor, aldermen, and councillors who were present in state attended by the sword and mace bearers. The service formed a fitting and imposing prelude to the proceedings of the Association.

On the afternoon of Tuesday, July 31st, Mr. D. Ford Goddard, M.P., gave a garden party to the members of the Association and their friends at Oak-hill. Many of the leading townspeople and local residents were invited to meet the Association, and in all about 500 were present. The weather was beautifully fine, music was provided by the Ipswich Town Band, and a most enjoyable afternoon was spent.

In many ways the minds of all of us have been for nearly a year past exercised with affairs in South Africa. It therefore comes as a somewhat remarkable coincidence that a resolution which may have the most far-reaching effects upon the medical profession should have been carried at the second general meeting (held on August 1st), at the instance of a member from Cape Town—namely, Dr. C. F. K. Murray, President of the Cape Town Branch of the British Medical Association, who proposed the following motion:—

That this meeting resolves that the Council be requested to issue a circular to all branches of this Association inviting them to express an opinion and to submit proposals on the question of the "wage-limit," as applied to clubs, provident dispensaries, and societies, &c., with a view to suggesting a reasonable and fair working basis; furthermore, that it be an instruction to the Council to report and advise this Association thereon at its next annual meeting.

We have in these columns so frequently and so earnestly insisted upon the necessity of the wage-limit that it is a great pleasure to us to be able to record the passing of this resolution, and we congratulate both Dr. Murray and the Association upon the fact.

Another most important decision arrived at at the same meeting was that agreeing to the appointment of a committee consisting of 24 members to consider and report upon the best means of re-organising the constitution of the Association, 12 members being nominated by the Council and 12 by the general meeting—the whole 24 members being eventually elected by the members assembled in general meeting. It was understood that the Council would submit the names of their nominees on the following day (Thursday) at the general meeting and that the full committee would likewise be settled on the same day.

As it is proposed that the committee should report to the branches by Feb. 1st next, in order to present a complete scheme of re-organisation to the annual meeting at Cheltenham, there can be no question that much has to be accomplished in the small time at the disposal of the committee, and there can be few who are sanguine enough to expect the committee to attain its object and present a workable scheme within the period suggested. True, there is the now abandoned scheme of constitution presented by the Council to, and rejected by, the Exeter Hall meeting which should at least form a very substantial nucleus; but every well-wisher of the Association, and none more heartily than ourselves, must fervently hope that no attempt will be made to pass a hurriedly prepared scheme which may in the end not attain the desired result.

At the invitation of the Gloucester Branch it has been decided to hold the next annual meeting of the Association at Cheltenham, and Dr. G. B. Ferguson has been appointed President-elect.

THE GENERAL MEETINGS.

THE FIRST GENERAL MEETING.

The first general meeting of the Association was held in the Central Hall of the Higher Grade School at 3 P.M. on Tuesday, July 31st, the Council being well represented on the platform, and some 150 members of the Association being present in the body of the hall.

Mr. WARD COUSINS, the retiring President, took the chair, and moved that the minutes of the last annual meeting be confirmed, which was agreed to.

The CHAIRMAN said that his first duty was a very sad one. Everyone present had no doubt heard of the very sudden death of the Duke of Saxe-Coburg Gotha, better known to us as the Duke of Edinburgh. He was sure that everyone present would sincerely join with him in the vote of sympathy which he was about to propose. The vote was couched in the following terms:—

That this meeting of the members of the British Medical Association, assembled at Ipswich, desire to express their deep sympathy with Her Most Gracious Majesty the Queen H.R.H. the Duchess of Edinburgh, and all the members of the Royal Family at the sad and sudden death of H.R.H. the Duke of Edinburgh and Saxe-Coburg.

Mr. Ward Cousins then vacated the chair in favour of Dr. William Alfred Elliston, Senior Surgeon to the East Suffolk and Ipswich Hospital and President for 1900-1901.

Dr. ELLISTON took the chair amidst applause, and moved that His Royal Highness the Prince of Wales, K.G., Hon. F.R.C.P., Hon. F.R.C.S., be elected an honorary member of the Association. He said that His Royal Highness had kindly intimated that he would be pleased to become an honorary member.

Professor RODDICK of Montreal seconded the motion, and expressed the hope that at some future meeting the Prince would honour them with his company.

The motion was carried unanimously.

Sir WALTER FOSTER, M.P., moved a vote of thanks to the retiring President, Mr. Ward Cousins, for so ably presiding over the Association during the past 12 months, which was seconded by Dr. C. HOLMAN and agreed to unanimously and suitably acknowledged by Mr. WARD COUSINS.

The President of the Council, Dr. JOHN ROBERTS THOMSON, then moved that the annual report and statement of accounts be adopted. He said that he knew that the moving of the adoption of the report was considered an opportunity for members to speak upon various points and, therefore, he would not detain the meeting with any remarks of his own.

Mr. ANDREW CLARK, the treasurer of the Association, seconded the motion in a few words.

The first member to rise to speak was Lieutenant-Colonel INCE, I.M.S., who expressed dissatisfaction with the action of the Council on certain points but congratulated the editor upon the Journal of the Association.

The report contained among other matters a paragraph about the Coventry Provident Dispensary wherein it was noted that

At the last annual meeting the Council was requested to ascertain whether any of the present medical officers of the Coventry Provident Dispensary were members of the Association and if so that they should be called upon to explain why they still continued to give their services to that institution. In their report these gentlemen claimed to have obtained several reforms in the last few years and hoped to obtain more, and that further, many of the statements made with regard to the institution were inaccurate.

The following motion was passed:—

Resolved: That the Council is glad that the medical officers of the Coventry Provident Dispensary are still endeavouring to get the rules altered and strongly recommends them to continue their efforts to obtain a wage limit as expressed in their letter of Oct. 8th.

In reference to the above Mr. G. BROWN considered that some stronger steps should be taken in the matter of the medical officers of the Coventry Dispensary, who should be called upon either to mend their ways or to cease being members of the Association.

Dr. R. SAUNDBY said that he could not see why the Coventry Dispensary should be specially singled out for r probation. He held no special brief for the Coventry Dispensary, and it was true that it had no wage-limit, but neither had the friendly societies any wage-limit. Gentlemen who held the posts of medical officers to friendly societies came down here and howled (uproar and loud cries of "Withdraw") at the Coventry Dispensary because it had no wage-limit, which was not fair. Dr. Saundby was

"Annals of Ipswich," by Nathaniel Bacon; and "Old much interrupted in the course of his remarks, and the Chairman appealed for order.

Dr. E. PHILLIPS of Coventry said that the Coventry Dispensary was condemned in 1892, when 25,000 persons belonged to it. The medical officers of the dispensary said that since 1892 they had been endeavouring to obtain reforms in the matter of the wage-limit, and apparently they were still endeavouring. The dispensary was condemned alike by THE LANCET and the *British Medical Journal*, and its advertisements were refused insertion by both these journals.

Dr. F. M. POPE of Leicester said that they must either let these medical officers alone or else expel them. There was no middle course. A motion for expulsion in a meeting like that, always raised the worst possible feelings. He was sure that they did not desire to do that. Even supposing a medical man started a practice at penny fees he did not believe the Association would be willing to expel him.

Mr. R. B. ANDERSON took up the subject of the Council's report on the question of the Midwives Bill. The terms of the report did not satisfy him. He therefore proposed a very lengthy rider to the section of the report in question, upon which a long, and in many ways irrelevant, discussion arose, the principal speakers being Dr. BRASSEY BRIERLEY, who harked back to the Coventry Dispensary question, Dr. J. HADDON, Dr. A. COX of Gateshead, who seconded the addition of Mr. Anderson's rider and said that THE LANCET *plébiscite* showed plainly that the feeling of the profession was against the Midwives Bill, and Mr. D. O'SULLIVAN. Finally Mr. VICTOR HORSLEY pointed out the danger of correcting one inaccuracy by another inaccuracy, and portions of Mr. Anderson's rider were undoubtedly inaccurate.

Mr. ANDERSON said that as the accuracy of his statement had been called in question he would withdraw his rider.

Amid cries of "Vote" the whole of the rider was eventually withdrawn.

Another paragraph in the report referred to the new Articles of Association in the following terms:—

> Certain difficulties and legal questions on the Articles of Association as adopted when the Association was first incorporated in 1874, which articles had been mainly drawn on the basis of the regulations of the unincorporated Association, having arisen, the Council consulted eminent counsel on the matter, and was advised to adopt amended regulations, as the Association had outgrown the old constitution. New regulations and articles were prepared by your Council and submitted to a special meeting of the Association held in London, on July 18th, but the resolution was not carried by the requisite majority.

A discursive conversation—it could not with justice be called a debate—arose over the last 10 words. Remarks were made for some two hours by Dr. LORIMER HART, Mr. R. B. ANDERSON, Dr. J. HADDON, Dr. BERNARD O'CONNOR, Dr. BRASSEY BRIERLEY, and others, in the course of which it was seriously proposed that the discussion on the report should be commenced *de novo* paragraph by paragraph. Finally, Mr. G. BROWN proposed that the sentence should simply run, "but the resolution was lost," which was carried.

Mr. VICTOR HORSLEY then said that he wished to draw attention to a leading article which had appeared in the *British Medical Journal* previously to the Exeter Hall extraordinary meeting. He contended that this article was not only an instance of *suppressio veri* but also of *suggestio falsi*. The article had intimated that discussion of the new articles which were desired to codify certain conditions would be allowed. At the meeting no discussion took place, while the new articles did not codify the machinery of the Association in the sense of amalgamating and simplifying its working, but changed the constitution of the Association. Mr. Horsley also complained that the report of the meeting presented to the members in the *British Medical Journal* was very incomplete. He therefore moved as an amendment that the following paragraph be omitted from that section of the report which spoke of the *Journal*:—

> The Council has every reason to believe that the *Journal* has proved increasingly useful to members. The publication of the proceedings of the last annual meeting and of its sections was commenced immediately after the conclusion of the meeting, and was completed before the end of November.

Dr. DAWSON WILLIAMS, who rose for the first time to address an annual meeting of the Association, regretted that his remarks were not to be on a more pleasant topic, and said that he took the entire responsibility for what appeared in the *Journal* and did not desire to shield himself behind the Council. He wished to be quite frank and would say that when the particular leading article to which Mr. Horsley had referred was written he himself had no idea that discussion would not be allowed. With regard to the observation in the same leading article to the effect that the design of the new articles was to codify, amalgamate, and make simple the articles a charge of *suggestio falsi* was made, Dr. Dawson Williams did not allow that that was an inaccurate statement of what the intentions of the new articles were. The intention was that the by-laws should be amalgamated with the articles; the intention was that the articles and by-laws should be codified; for if the articles were looked at it would be found that there were special resolutions amending articles, and the intention was to make certain additions. He was, however, inclined to admit that in the article referred to it was not sufficiently clearly stated what it was these additions were. As to the report of the meeting he could only print what was supplied to him. He considered it necessary that the report should appear in the *Journal* for the week in which the meeting took place and owing to the *Journal* going to press upon the day following the meeting a *verbatim* report was not practicable.

Mr. VICTOR HORSLEY eventually consented to withdraw his amendment on condition that his speech and the reply of Dr. Dawson Williams should be printed *verbatim* in the *British Medical Journal*. The report was then agreed to as amended, and the meeting adjourned.

THE (ADJOURNED) FIRST GENERAL MEETING.

The adjourned meeting was held on Tuesday evening in the Lyceum Theatre at 8.30 for the delivery of Dr. Elliston's presidential address. The attendance was good and amongst those present were the Mayor of Ipswich, Sir Charles Dalrymple, M.P., Mr. Alderman C. H. Cowell and Mr. Alderman S. R. Anness, together with several of the town councillors.

The MAYOR (Mr. W. A. Churchman) made a feeling reference to the deaths of the King of Italy and of the Duke of Edinburgh and moved:—

> That the President and members of the British Medical Association, assembled at their annual meeting, together with the townspeople of Ipswich, desire respectfully to express to Her Most Gracious Majesty their deep sorrow and sympathy at the severe loss Her Majesty has sustained in the sudden decease of the Duke of Edinburgh, and trusts the Almighty may afford to Her Majesty and the members of the Royal Family abundant consolation.

The resolution was unanimously agreed to.

The MAYOR then, in a few felicitous phrases, welcomed the members of the Association to Ipswich, and congratulated Dr. Elliston and the townspeople upon his selection as President, which they all looked upon as a very great honour.

Dr. ELLISTON rose amidst applause and thanked the Mayor for his kindly words. He then proceeded to read his presidential address as follows:

THE PRESIDENT'S ADDRESS.

[Dr. Elliston took as the title of the address "Some Incidents in the Evolution of the Modern Physician," and commenced by welcoming most heartily to East Anglia the sixty-eighth annual meeting of the British Medical Association. After commenting upon the growth of the Association during the quarter of a century since its last meeting in East Anglia and after detailing the various literary and scientific reasons why Ipswich should prove an interesting place of reunion, he continued:—]

East Anglia and Medicine.

It is 26 years ago since this great association met in East Anglia, in the city of Norwich, and it speaks for its ever-growing importance and utility that on that occasion there were some 6000 members only, and the scientific business of the meeting was conducted in four sections. On this occasion, the first meeting of the nineteen hundreds, the members have increased to over 18,000, of whom 4000 are members of our Colonial branches, and the scientific work needs 13 sections. The town in which we are assembled is one of much commercial importance. Manufacturers and merchants do a considerable business with many of our colonies. It is an ancient town, and there are many beautiful specimens of old houses, gateways, and corner posts. To those who desire a better acquaintance with its history I would refer them to "Round About Ipswich," by the late Dr. J. E. Taylor;

Corner Posts," by Mr. J. S. Corder, recently published. Great Englishmen have been associated with Ipswich in the past—Nicholas Bacon, the Lord Keeper, was a freeman of Ipswich; his son, the great Lord Bacon, represented Ipswich in two Parliaments, and in more recent times Lord Nelson was high steward. Thomas Gainsborough lived and painted here. Charles Dickens found Ipswich to be worthy of many scenes for his fertile pen; but the personal association which throws lustre upon Ipswich is the fact that the great Cardinal Wolsey was born here. It is still, I think, a standing reproach to Ipswich that there is no monument to his memory, except one that he built himself, and which is the sole remains of the great college he intended to have raised at Ipswich. Among the illustrious medical names associated with East Anglia are William Gilbert, Sir Thomas Browne, Edward Rigby, J. G. Crosse, Sir Astley Cooper, the Brothers Paget Sir Thomas Watson (educated at Bury St. Edmunds), Jeaffreson (ovariotomist), Sir William Gull, John Hilton, Sir George Humphry, and many others, while among those yet living are some of the foremost names in the science of medicine.

The Development of British Medicine.

The early history of medical science in this country is concurrent with the advance of all scientific knowledge. During the Dark Ages men of learning had spent their time in translating and repeating what the Greeks had taught, until at last they had come to believe that Ptolemy, Galen, and Aristotle had settled most of the scientific questions and that no one had any right to doubt their decisions. In the annals of British science there was one exception to the apathy of Englishmen—Roger Bacon, the Franciscan friar, who is stated to have been the first man in Europe to make gunpowder. Green speaks of him as living before his time, but the probability is that travelling and studying natural science, and particularly alchemy in Italy, he imbued ideas of scientific progress that were absolutely dormant in this country until 250 years later. The continuous progress of British science commenced with the return of Thomas Linacre to Oxford from the Italian universities, whence he came imbued with what was termed the "new learning," then recently introduced by the Greek professors who had been attracted to Italy. At this time the learned of all countries were profoundly impressed by the recent discovery of America, by the scientific discoveries of such men as Copernicus and Paracelsus. The printing press was changing the conditions of life, and literature became the common property of all. The great event in the sixteenth century, so far as medicine is concerned, was the success of Thomas Linacre in persuading the King to grant a charter to a small body of medical graduates, who were thenceforth called the Royal College of Physicians. He succeeded, it is said, principally through the great and powerful help of Cardinal Wolsey. The charter of the Royal College of Physicians was granted on Sept. 23rd, 1518. It gave them the sole power to license to practise physic in London or within seven miles radius, with other privileges which were confirmed by a statute of Henry VIII. and extended to the whole of England. Linacre was the first President, and he held office to the end of his life.

In 1540 the Barbers and Surgeons were united by Act of Parliament, 38 Henry VIII., cap. 42. They were incorporated as the "Masters or Governors of the Mysterie and Commonalitie of Barbers and Surgeons of London." Thomas Vicary, Serjeant Surgeon to Henry VIII., who had been previously Master of the Barbers' Company, was the first Master of the combined Companies. The Company employed Holbein to paint a picture with the King on his throne, who, with his two physicians, Sir William Butts and Dr. John Chantre, with his apothecary kneeling on his right, presents the Act, which is painted with a seal as if it were a charter, to Vicary, who, with 14 other barbers and surgeons, is on his knees. In 1543 the irregular practitioners of London were protected by Act, and became one of the corporations of the City, and both by royal charters and by Acts of Parliament exercised the power of granting licences to practise medicine. In 1505 the Royal College of Surgeons of Edinburgh was founded, and in 1599 the Faculty of Physicians and Surgeons of Glasgow.

Scientific Medicine.

Soon after the birth of the new learning the work of Vesalius, the brilliant young Belgian, aided by his contemporaries Fallopius and Eustachius, raised anatomy to a science based upon the dissection of the human body itself, in addition to that of animals.

It was at the very commencement of the seventeenth century that the original research of two great English physicians, Gilbert and Harvey, completely altered the position of our country in scientific advance. Hitherto there had been no contribution of importance; from this time, however, a complete change came over the scene, and from that day to this our countrymen have taken a conspicuous part in the solution of the many scientific problems and discoveries of the last three centuries. Our East Anglian county of Essex has the honour to be the birthplace of one of these illustrious physicians and the resting-place of both. William Gilbert was born and buried at Colchester, and at Holy Trinity Church there is a monument to his memory. He died unmarried, at the early age of 57 years, in 1603. William Harvey died in 1657 and was buried at Hempstead, in the same county, in his eightieth year.

William Gilbert—or Gilberd as it is spelt upon his mural tablet—was born in the same year that Vesalius was appointed professor of anatomy at Padua, in 1546. He was educated at Cambridge and became a Fellow of St. John's in 1561. In 1573 he settled in London and became subsequently physician to Queen Elizabeth and President of the Royal College of Physicians. His leisure hours were given to chemistry and magnetism. In 1600 he published his "De Magnete." He established the magnetic nature of the earth and he conjectured that terrestrial magnetism and electricity were two allied emanations of a single force. He was the first to use the terms "electric force" and "electric attraction" and to point out that amber is not the only substance which when rubbed attracts light objects, and he described how to measure the excited electricity by means of an iron needle moving freely on a point. He described the properties of the magnet and its attraction and its direction in the relation of the poles of the earth.

William Harvey, the discoverer of the circulation of the blood, was born at Folkestone, graduated at Cambridge, subsequently travelling through Germany and France, and enrolled himself as a student of the University of Padua. His name heads the list of what was called the Jurist University for the years from 1600 to 1602. Here he studied under the celebrated surgeon and anatomist Fabricius. Upon his return to London he joined the College of Physicians and was shortly after his commencement of practice appointed physician to St. Bartholomew's Hospital. In 1615 he was appointed Lumleian Lecturer, an appointment which he held with more or less interruption due to the political disturbances of the times until 1656. He was physician to James I. and Charles I. There are many evidences that his eminence was appreciated by his contemporaries. In 1620, for instance, he attended a conference with representatives of the College of Physicians to protest against the proceedings of the Surgeons, who were moving in Parliament in their own interests, but he failed to induce his own university to coöperate with the College of Physicians. During the Civil War he was in attendance upon the King, and while quartered with him at Oxford he was elected Master of Merton. The work of William Harvey which has immortalised his name in the annals of medicine was published in the year 1621 at Frankfort as "An Anatomical Treatise on the Movement of the Heart and Blood in Animals." Mr. D'Arcy Power, in his admirable contribution to the "Masters of Medicine," says, "Harvey chose Frankfort as the place for the publication of his book because the annual book fair held in the town enabled a knowledge of his work to be more rapidly spread than if it had been issued in England." His researches upon this subject had long occupied his attention, and had been referred to from time to time in his Lumleian Lectures from the year 1606 onwards. The bent of his mind and his method of departure are explained in his book, when he says, "I profess both to learn and to teach anatomy not from books, but from dissections; not from the position of philosopher, but from the fabric of Nature." The results of Harvey's observations are the more remarkable when we consider the scanty instruments and appliances then available, contrasted with our own time when the senses, the arts, and the sciences are all brought into requisition for the discovery and analysis of objective symptoms. The microscope was as yet undiscovered. The number of pulse-beats was not measured by a watch until nearly a century after Harvey's time. In his day, according to Dr.

Norman Moore, physicians contented themselves with estimating the character of the pulse rather than its precise rate. Specialism as now understood did not exist, and Harvey was a surgeon as well as a physician. He performed surgical operations to which he frequently refers. The brilliant work of Galileo, Gilbert, and Harvey, the awakening philosophy of Francis Bacon in this country and Descartes in France, gave an impetus to original research and the investigation of causes that was remarkable in upsetting ancient traditions, and little by little real observation and experiment took the place of mere authority.

The Royal Society.

It was about this time that a small body of students assembled at Oxford in 1645 who were later, in 1662, to be known as the Royal Society. It was established as an association of men interested in the development of mathematical and physical science. It is the oldest scientific society in Great Britain, and one of the oldest in Europe. Italy had already established two societies in the time of Galileo and Torricelli. In Germany the Imperial Academy of the Curious in Nature was founded in 1662. The famous French Academy of Science was legally established by the French Government in 1666. All these societies greatly influenced scientific research, and many men who were hitherto unable to publish now read papers at their meetings. Of our own Royal Society it is recorded in the first journal book of the society that these persons met together on Nov. 28th, 1660, to hear Mr. Wren (afterwards Sir Christopher Wren) lecture at Gresham College, London, mentioning twelve names, including three physicians, and that after the lecture they returned to converse and pass resolutions for future guidance. At one of their early meetings 52 was fixed as the number of the society, persons of the rank of Baron, Fellows of the Royal College of Physicians, public professors of mathematics, physics, and natural philosophy of both Universities being supernumeraries. In October, 1660, the King offered to be entered one of the society, and next year the society was incorporated under the name of "Royal Society," the charter of incorporation passing the Great Seal on July 15th, 1662. Soon after incorporation the Royal Society published papers by Malpighi, who by the microscope revealed the minute infinite particles of living bodies.

Somewhat earlier than this two of our countrymen—Boyle, son of Lord Cork, and John Mayow—did much for progressive research and anticipated some of the great discoveries in chemistry and physiology of a century later. Boyle proved that a candle could not burn or an animal breathe without what was afterwards proved to be oxygen gas. These observations were said to have been attentively listened to at the early Oxford meetings of Wilkins and his friends by a young physician, John Mayow, who died at the early age of 34 years, but not before he had proved that air was made up of two portions, the one heavy which supports flame and light, which he called "fire air," and which was subsequently discovered to be oxygen; the other light, useless for living and breathing, and this was the larger portion, which we now call "nitrogen."

Practical Medicine.

Practical medicine in Great Britain was developing in this century; a pharmacopœia had been issued, cinchona bark was introduced; and botanical gardens were established. The teachings of Francis, Lord Bacon, and subsequently of John Locke, influenced the direction of thought, while the learning and superb common sense of that great physician Sydenham gave effect to the general advance of this period.

In surgery the growth was slow, principally through the general want of knowledge of anatomy acquired by dissection; but two Englishmen had distinguished themselves in this branch—Nathaniel Highmore and Thomas Wharton—the former discovering the cavity in the superior maxillary bone which is still known by his name and Thomas Wharton discovering the duct of the maxillary gland which is still recognised as Wharton's duct. The diary of Mr. Samuel Pepys illustrates the primitive method of procedure at that time. He says that "on February 27th, 1663, he walked with Commissioner Pett to Chirurgeons' Hall, we being all invited thither and promised to dine there, where we were led into the theatre, and by-and-bye came the reader, Dr. Tearne, with the Master and Company, in a very handsome manner, and, all being settled, he commenced his lecture, and his discourse being ended, we had a fine dinner and good learned company, many doctors of physic, and we used with extraordinary great respect." He also speaks of the gilt cup the gift of Henry VIII., with bells hanging to it, which every man had to ring by shaking after he had drunk up the whole sup. There is also, he says, a very excellent piece of the King, by Holbein, that stands up in the hall, with the officer of the Court kneeling to him to receive the charter.

The man who of all others at the early part of the eighteenth century gave an impetus to medical education was the illustrious Boerhaave, who at the University of Leyden attracted students from all parts, and particularly from this country. He was elected lecturer in 1701 and a few years later occupied the chair of chemistry. He shares with Dr. Hales, the great English chemist, the honour of founding the science of organic chemistry. So highly was Boerhaave esteemed by his fellow-countrymen that upon his recovery from a serious illness in 1722 there was a general illumination of the town of Leyden.

At this time there was practically no systematic medical training in the British Isles, but there were isolated attempts at special instruction. A refugee surgeon, Brussière, settled in England in the time of Queen Anne, and for the first time gave lectures in anatomy in England. In 1711 Dr. Richard Mead lectured and continued his lectures for four years to the Barber Surgeons. In the same year Cheselden commenced a series of lectures which continued for 20 years. The first Munro opened a similar course at Edinburgh. John Rutherford settled in the same city in 1721. Speaking of him, his grandson, Sir Walter Scott, says: "He was one of those pupils of Boerhaave to whom the school of medicine in our northern metropolis owes its rise." Together with Sinclair, Purvis, and Innes he established a laboratory and taught the rudiments of chemistry and other branches of physics. In 1766 Rutherford was appointed Lecturer in Medicine and until 1785 he delivered the lectures in Latin. He founded clinical teaching in Edinburgh. The success was so great that the managers of the Royal Infirmary appointed a special ward for the exclusive use of Rutherford. This laid the foundation of that form of teaching in which Edinburgh has held proud pre-eminence.

Increased Study of Anatomy.

Speaking of the history of medicine in the eighteenth century Lecky says: "A still more important fact in the history of medicine was the increased study of anatomy. The popular prejudice against dissection which had for centuries paralysed and almost prevented this study still ran so high in England that in spite of the number of capital punishments it was only with great difficulty the civil power could accommodate surgeons with proper subjects, and all publicity was studiously avoided. With such a state of feeling it is not surprising that the English medical school in the beginning of the eighteenth century should have been far inferior to that which gathered round the chair of Boerhaave at Leyden." In London there was no concrete medical school until quite late in the century. William Hunter came to London and commenced to lecture in 1747; he became a member of the Corporation of Surgeons, and was appointed Obstetric Physician to the Middlesex Hospital in 1742. He is stated to have been an early riser and a man of untiring energies. He was undoubtedly the first great teacher of anatomy in London, and we owe his selection and advance to Dr. James Douglas, an anatomist and obstetrician whose name is associated to this day with modern anatomists as the discoverer of Douglas's pouch.

The advancement of medicine and the allied sciences in the eighteenth century commenced with the contributions of Boerhaave and Hales in organic chemistry, while Buffon taught natural history, and the Swede Linnæus patiently worked out the minute characters of animals and plants. In physics the Scotch physician Black proved the amount of heat dormant in water and steam, which Watt afterwards applied to the steam engine. Electricity was greatly advanced by Benjamin Franklin, the American, who attracted lightning from the sky and worked with it in his own laboratory. Galvani found the wonderful power hidden in the nerves of the frog, and Volta showed how powerful electricity could be produced by two metals placed in acid and water, and this could be carried along a wire of any length which touched the battery at both ends. In physiology great advances were made by Haller, Bonnet, and Spallanzani. John Hunter, by his untiring energy, industry, and perseverance founded the science of comparative anatomy, and as an anatomist and as a practical surgeon built himself an everlasting fame.

Birth of Chemistry.

The most remarkable scientific advance was undoubtedly

in the science of chemistry. Almost to the last quarter of the century the theory of "phlogiston" had confused and mystified the researches of the many great and distinguished scientists who had worked in this direction. The important part played by our countrymen in the elucidation of truth is highly satisfactory. The discovery of the gases which enter into the combination of air, water, and fire transferred the alchemy of old into the modern science of chemistry. It was the discoveries of Black, Priestley, and Cavendish, and the independent work on similar lines of the great Swedish chemist, Schiel—himself a practising apothecary—that enabled Lavoisier to recognise the value of the discoveries and proclaim their effects upon science in his "Elements of Chemistry." At the early age of 51 years this philosophical chemist was guillotined by his countrymen in 1794, during the French Revolution. Black discovered carbonic acid in 1756, Cavendish hydrogen in 1766, Rutherford nitrogen in 1772; and it was not until 1774 that Priestley—a Nonconformist minister at Leeds—discovered oxygen. It was also independently discovered by Schiel in 1775. They both deserve credit. Priestley's discovery was made with red oxide of mercury; he heated it, and found that a gas came off, which he collected, and he experimented with two mice and he found that they breathed it and lived much longer than in ordinary air; then he breathed it himself and found that he felt singularly light and easy for some time after. "Who can tell," he writes, "whether this pure air may not become a fashionable luxury. As yet, only two mice and myself have had the privilege of breathing it." It is only of recent years that the great value of the inhalation of oxygen gas has been recognised and utilised in the treatment of certain diseases of the heart and lungs. I think many of us could bear testimony to its life-saving properties in cases which appeared hopeless.

[After referring to the practical work done in the eighteenth and early nineteenth centuries by Jenner, by Dr. Richard Mead (who discovered the acarus scabiei), by Dr. J. Lind (who traced scurvy to dietetic errors), by the elder Heberden, by Dr. Robert James (the inventor of James's Powder), by Dr. Matthew Baillie, by the brothers Hunter, by Lettsom, Abernethy, Charles Bell, Cheselden, Astley Cooper, Pott, Hey, and many others, Dr. Elliston continued:—]

Medical Legislation.

The important legislation of the nineteenth century was the Apothecaries Act of 1815. This Act has been proved to be one of the greatest boons ever conferred upon the medical profession, and whatever may be the sentimental objection to a learned profession being connected with traders we are bound to remember that to those who sought the Act of 1815 we are indebted for a reform which has been far-reaching in its results. Previously to this Act the education of the medical practitioners of England and Wales was entirely optional on their part, and although many of them possessed degrees or licences of the Universities or Colleges the greater number possessed no such qualification and many of them were wholly illiterate or uneducated. About the year 1850 a preliminary examination in arts was instituted as a necessary and independent requirement before proceeding to the medical curriculum. In 1858 the Medical Act became law, and by this Act the L.S.A. of London was permitted to practise throughout Scotland or Ireland. The Apothecaries Amended Act passed into law in 1872. Women were admitted to practise in 1876. In 1878 the pharmaceutical chemists were licensed by Act. It is worthy of observation that the State has hitherto not interfered to prescribe the subject matter or the minimum standard of medical examination, although there has been at least one attempt by the Government of the day to establish a uniform minimum. Under the beneficent legislation of the century, and particularly by the establishment of the General Medical Council, jealousies between the different branches of the profession have mainly disappeared, and it is difficult now to realise that at the commencement of the present century it was far otherwise, thus, we find a young physician advanced by his College in 1808 as a reward for a pamphlet against the growing pretensions of army surgeons. The use of wise legislative enactments in the social influence and status of the profession soon became apparent, but of course its full effects were not evident until many years had elapsed. It is quite within my memory that the only qualification recorded in many instances in the annual "Medical Directory" was "in practice prior to 1815." It is not a little singular that the Apothecaries Act has gradually extinguished the apothecary as then understood. I can remember an apothecary's shop in this town. That has now become a thing of the past, as will be soon, I trust, what is called the open surgery of to-day. With the better education required and the institution of examinations a different class of students were attracted to medicine, and they were rarely satisfied with the apothecary's licence but sought further a surgeon's diploma.

The Medical Press.

The growth of the medical press and the influence it had upon the medical profession commenced with the efforts of William Sharman, M.D., who was born at Harwich in 1767. He commenced in 1810 to edit a periodical which was styled the *New Medical Physical Journal or Annals of Medicine, Natural History, and Chemistry.* It was in existence in 1815.

In 1815 Thomas Wakley was a student of the Borough Hospitals; the greater part of his medical education was acquired at the Grainger School. In 1817 he became a M.R.C.S. and commenced practice. Fortunately, perhaps, he did not altogether succeed and his great talents were turned in the direction of journalism. He founded THE LANCET in 1823 with the primary object of disseminating much needed information hitherto regarded as the exclusive property of members of the London hospitals and also with a view of exposing the family intrigues that influenced the appointments in the London hospitals and the medical corporations. For the first ten years of its existence THE LANCET provoked a succession of fierce encounters between the editor and the members of the privileged class in medicine. In the first number Wakley made a daring departure in commencing a series of shorthand reports of hospital lectures. On Dec. 10th, 1824, Mr. Abernethy applied to the Court of Chancery for an injunction to restrain THE LANCET from publishing his lectures. The injunction was refused by Lord Eldon, on the ground that official lectures in a public place for the public good had no copyright vested in them. Mr. Wakley then commenced a regular issue of hospital reports of cases and notable operations. The irritation at them was so great that his exclusion from St. Thomas's Hospital was ordered. He also carried on a campaign against the Royal College of Surgeons of England. Mr. Wakley and his successors have done work which has advanced the general interest of the profession by leaps and bounds, and during the long period of its usefulness THE LANCET has always availed itself of the best talent, and many of those who have achieved success in other departments have given their early work to the advancement of medical journalism. At the present time the influence of the press is enormous. Our own *Journal*, reflecting the opinions of this Association, shares with THE LANCET and many other medical periodicals in guiding the profession upon every question to the direct issues constantly occurring.

[Dr. Elliston here acknowledged the impossibility of giving anything more than quite a brief enumeration of the brilliant work of the British physicians and surgeons of the nineteenth century. He alluded especially to the work of Richard Bright, of Hodgkin, of Thomas Addison, and of Sir William Gull (all of whom were members of the staff of Guy's Hospital), of Sir William Jenner, of Graves, of Hughes Bennett, Marshall Hall, Elliotson, Stokes, Alison, Sir Thomas Watson, the Farrs, Sir J. Simpson, Tyler Smith, the Budds, Spencer Wells, Bucknill, Tuke, Bowman, Hilton, Sir B. Brodie, Aston Key, Sir W. Lawrance, Robert Liston, Syme, Sir W. Fergusson, Sir George Humphry, and many others living and dead.]

It is not, perhaps, Dr. Elliston continued, so generally known as it deserves to be that William Jeaffreson of Framlingham in the county of Suffolk, an East Anglian surgeon, was the first surgeon in England to perform the modern operation of ovariotomy by a small centre incision. The circumstance, as recorded in the Transactions of the Provincial Medical Association of 1837, are as follows: "Mr. Jeaffreson in 1833 lost a patient suffering from an abdominal tumour. She died from tuberculous disease of the lungs and, obtaining the consent of the friends, he made a post-mortem examination, which satisfied him that the tumour could have been removed, and but for the disease of her lungs her life might have been spared." In November of the same year Jeaffreson and his friend King attended together a lady in her confinement with a small tumour. They subsequently advised an operation and

in May, 1836, a central incision was made, about one and a half inches long, the cyst tapped, withdrawn, the pedicle secured by ligature, and the ends cut off short. The wound was adjusted by two sutures and napkins wrung out in the coldest water were constantly applied to the wound. Sulphate of magnesia was administered every four hours and all went well until the tenth day, when Jeaffreson was called to his patient at 3 A.M., to find her pulseless, with incessant vomiting and hiccough and griping pains in her body. A stimulating enema with two grains of opium gave her speedy relief and she recovered. His friend and neighbour King, at Saxmundham, Suffolk, about 10 miles away, operated a few weeks later with complete success, his incision being somewhat longer—about three inches. Two years subsequently a third East Anglian surgeon, Crisp of Harleston, who lived about 20 miles from Jeaffreson, was also successful with an incision of two inches in length. These three cases, which were performed by three surgeons in general practice in this county were the first in England in response to the doctrines of William and John Hunter and are the more remarkable when we consider that no operation of the kind was attempted in London until four years later and no ovariotomy was performed in a London hospital until 10 years after Jeaffreson's case.

Antiseptics and Anæsthetics.

The two great discoveries of the nineteenth century in connexion with both medicine and surgery are the antiseptic treatment (for which we are indebted to the genius of a living surgeon, Lord Lister) and the use of anæsthetics. The anæsthetics now in general use are nitrous oxide gas, discovered by Sir Humphry Davy in 1800; sulphuric ether, by Faraday; and chloroform, by Liebig. I shall not detain you by a history of the introduction of anæsthetics into surgical practice, but as we have still living in East Anglia a most distinguished surgeon (Mr. William Cadge), who was present on the occasion of the first operation in London under the influence of ether I thought it would be interesting to hear his record of the circumstances. Mr. Cadge says: "Robert Liston was the first surgeon in this country to use ether, and those who were present at University College Hospital on Dec. 21st, 1846, and witnessed the complete and perfect success of that first venture, will not easily forget the dramatic character of that scene. I was present and assisted at the operation—amputation of the thigh by the double flap method. Someone present timed the operation; it took 30 seconds; the few arteries were tied and all signs of blood cleared away. A towel was then thrown over the stump and we watched anxiously for the patient to show that he was not dead; he presently woke up, and when asked once or twice if he could stand the pain of the operation, he accused us of cruelly trifling with his feelings, and when the towel was removed and he saw the naked stump he burst into tears, and I thought Liston would do the same."

[Dr. Elliston concluded an interesting address by a *résumé* of the various Acts of Parliament recently passed having for their object the maintenance and improvement of public health.]

At the conclusion of the address, which was listened to with close attention,

Mr. HOWARD MARSH proposed a vote of thanks to the President for his address, which was marked by great research, clear statements, and a due appreciation of the great truths passed in review.

Dr. I. H. CAMERON (Toronto) seconded the motion and expressed the pleasure with which they had all listened to a survey of 500 years of the history of medical and surgical art.

The motion was passed *nem. con.*, and the PRESIDENT briefly replied.

Mr. WARD COUSINS, on behalf of the Council, offered a hearty welcome to the foreign and colonial representatives, to which Professor RODDICK of Montreal and Professor NICOLAYSEN of Christiania replied.

The meeting then terminated.

SECOND GENERAL MEETING.

The second general meeting was held in the Central Hall of the Higher Grade School on Wednesday afternoon, the room being well filled.

The President of the Council, Dr. ROBERTS THOMSON, declared the names of those not returned to the Council and also the names of the newly-elected members. He also announced that an invitation had been received from the Gloucester branch asking the Council to hold the meeting of the Association in 1891 at Cheltenham and that the Council recommended that the invitation be accepted. This was agreed to and Dr. G. B. FERGUSON was appointed President elect.

The PRESIDENT then called upon Dr. Pye-Smith to deliver the address in medicine which will be found at p. 309.

At the conclusion of the address Dr. SAUNDBY moved, and Colonel KENNETH MACLEOD, I.M.S., seconded, a vote of thanks to Dr. Pye-Smith. This was carried unanimously, and Dr. PYE-SMITH returned thanks.

The PRESIDENT then said that it was his very pleasant duty to award the Middlemore Prize for 1900 to Dr. Ernest Maddox of Bournemouth. This prize is of the value of £50, and was awarded this year for researches in ophthalmology.

The report of the Parliamentary Bills Committee was then taken, and Mr. R. B. ANDERSON made a personal explanation with reference to some remarks which he had made in moving a rider to the sections of the report dealing with the Midwives Bill upon the previous day, the accuracy of which had been called in question by Mr. Victor Horsley.

On the report of the Scientific Grants Committee, Professor BYERS urged that the distribution of the grants was too much centralised. The grants should, in his opinion, be spread more over the country. He also objected to the giving of grants to rich London hospitals.

Dr. HUDSON moved—

That the scientific grants be discontinued and the money devoted as prizes to work already done.

At present he considered that the money was frittered away.

As, however, no seconder came forward the motion dropped.

On the report of the General Practitioners and Ethical Committee Dr. C. F. K. MURRAY, president of the Cape Town Branch, spoke of the growing difficulty at the Cape of dealing with friendly societies and clubs on the matter of a wage-limit. The medical practitioners in South Africa looked to the Council for guidance in this matter and he suggested that those at home who had had experience of the difficulty of the question should help their brethren abroad in a practical manner by expressing their opinion, and to this end he submitted the following motion:—

That this meeting resolves that the Council be requested to issue a circular to all branches of this Association inviting them to express an opinion and to submit proposals on the question of the "wage limit" as applied to clubs, provident dispensaries, and societies, &c., with a view to suggesting a reasonable and fair working basis; furthermore that it be an instruction to the Council to report and advise this Association thereon at its next annual meeting.

The motion was seconded by Mr. G. H. BROADBENT, who thought it shocking to hear that such a state of things existed in South Africa. He considered that as the question had been before the Council for eight years it was quite time that something was done by them in the matter.

The motion was then agreed to, with one dissentient.

The PRESIDENT then called upon Mr. Victor Horsley to submit his motion, which stood in the following terms:—

That a committee be appointed to consider and report upon the best means of reorganising the constitution of the British Medical Association, such committee to furnish a provisional report to the branches by March 1st, 1901.

Mr. HORSLEY sketched his idea of what the reformed constitution of the Association should embrace. He referred specially to the creation of delegates from the branches to the Council and deprecated the view so commonly held that a delegate must be in a subservient position. He also referred to the establishment of a medico-political bureau and of an information bureau. He concluded by suggesting that the proposed committee should consist of 23 members, and if his resolution were accepted he would read the names which he proposed to submit to the meeting.

Dr. BRASSEY BRIERLEY in seconding the motion said that as Mr. Victor Horsley's motion covered most of the points with which he had dealt in his notices of motion he would withdraw them all except one, which he would bring forward later.

Mr. T. J. VERRALL, a member of the Council, then rose in support of the motion.

Dr. A. COX wished to move a rider dealing with the principle of delegation. It was, however, ruled by the PRESIDENT

that the rider was out of order. It could, however, be put as an amendment.

Dr. COX, however, withdrew it at the suggestion of the PRESIDENT, intimating his intention of bringing it up as a fresh motion if Mr. Horsley's proposal were accepted.

Mr. R. BRUMMITT asked Mr. Horsley if he would fix an earlier date than March 1st, as the Australasian branches would thereby have an opportunity of expressing their opinion on the subject.

Mr. HORSLEY agreeing to this the date was altered to Feb. 1st, and his motion was thereupon put and carried unanimously.

Mr. HORSLEY then read out the names he proposed for the committee, upon which a long discussion ensued, it being eventually agreed that the committee should consist of 24 persons, of whom one-half should be nominated by the Council and their names would be handed in to the general meeting which was to take place on the following day. The other 12 members were to be nominated by the general meeting, with whom also the final selection of the whole committee was to rest.

Dr. A. COX again brought forward his original rider to Mr. Horsley's resolution as a new motion, which, after some discussion, was lost, it being felt that the hands of the new committee appointed to consider the alterations in the constitution of the Association should not be tied in advance.

The meeting then adjourned.

THE SECTIONS.

MEDICINE.

WEDNESDAY, AUGUST 1ST.

The President, Dr. T. BUZZARD (London), stated that he had been requested not to give a formal introductory address.

Influenza as it Affects the Nervous System.

Dr. JUDSON S. BURY (Manchester) opened this discussion. He referred to the diversity of symptoms of influenza in different epidemics and in different persons which made it very difficult to construct a scheme of symptoms which could be said to represent a typical case of the disease. Four types of the disease could be recognised, distinguished by the organ chiefly affected; (1) affecting the mucous membranes; (2) the gastro-intestinal tract; (3) the heart; and (4) when the nervous system was exclusively attacked. In all these forms and in nearly every case the nervous system was profoundly affected, as evidenced by the pain in the head and the back, which was seldom absent, hyperæsthesia, delirium, and depression, all symptoms which were the result of the action of a toxin on the nervous system. In cases where the more ordinary nervous symptoms appeared to be absent careful observation would show others, such as undue dyspnœa in pneumonic cases and tachy- and brady-cardia in cardiac cases which were essentially nervous in nature. At the same time he was not prepared to say that in every case the influence of the toxin on the organ was exerted solely through the nerve. He recognised two chief groups of nervous affections following the disease—those developing during the febrile stage such as meningitis and encephalitis where the brain tissue was directly affected, and those arising later, due probably to a less virulent toxin, and in which while visible degeneration of nervous matter might be discovered in a proportion yet in many nothing of the kind could be seen. In the first group, again, he distinguished a comatose and a delirious type. The former was a very serious state, often ending fatally, and he quoted at length one or two cases. Post mortem a condition of hæmorrhagic meningo-encephalitis was found and a drawing of the condition in the pia-arachnoid was exhibited, showing endarteritis apparently of recent origin with thrombi in the diseased vessels. Pfeiffer's bacillus, though difficult to demonstrate, had been found, and cases of meningitis were also due to this as well as sometimes secondary to otitis media or nasal suppuration. Other results of influenza were cerebral embolism, thrombosis, and abscess. The delirious type was common in children. The spinal cord might be attacked together with the brain or independently. Generally it was affected after the initial attack but sometimes during it. The enumeration of every form of nervous disease that had been reported as following influenza would be merely the enumeration of every known form of nervous affection of brain, spinal cord, or peripheral nerves. The peculiarity of the influenza toxin as distinguished from that of diphtheria was that it affected nervous tissues haphazard and not so much in groups. He related a series of cases illustrative of his remarks, referring particularly to the various forms of multiple neuritis, and asked for the opinion of members as to whether in their experience the nerves affected were most frequently the sensory or motor, and also if anyone present had seen cases where the respiratory muscles were paralysed. In conclusion, he said that it was possible that multiple neuritis might be due to bacilli as yet unknown and not to Pfeiffer's or the Klebs-Lœffler bacillus, these being merely predisposing agents.

Sir WILLIAM BROADBENT (London) distinguished between the results of influenza due to toxins and those due to the bacilli of the disease. He thought the poison generally attacked the weak spot. He related a case of acute dementia following influenza. He thought that in the neurasthenic, neuralgic, and similar cases they had the effect of the toxin, while Dr. Bury's acute comatose type was probably similar in character to those cerebral attacks in malignant malaria where the vessels were found choked with parasites and leucocytes. He had seen a most acute case of the kind during an epidemic of influenza on board a training ship. Five boys became comatose and two died. The chaplain who had visited the boys was seized with the disease. Coma came on very rapidly. There were muscular rigidity and inability to empty the bladder, the temperature was 103° to 104° F., and the patient, though rallying after large doses of quinine hypodermically administered, died in a week. Another patient had meningitis, some paraplegia, and very extensive herpes round the loins. Another had unilateral convulsions of great severity, accompanied by no paralysis. This patient made a complete recovery which was retarded somewhat by long-continued sleeplessness. In a case which he considered to be due to thrombosis of the vessels of the right cerebral hemisphere the patient had left hemiplegia of slow and gradual onset. It was 10 years ago and he had continued to show progressive improvement ever since, and was now nearly well. He had seen a case of universal multiple neuritis which eventually proved fatal by implication of the respiratory muscles.

Sir PETER EADE (Norwich) thought the fact worthy of notice that the section was still discussing influenza ten years after its reappearance as an epidemic, whereas as far as they knew previous epidemics had disappeared much more rapidly. He could not agree with Sir W. Gowers that the incidence of the influenza poison was chiefly on the motor nerves. He thought that the medulla oblongata bore the brunt of the attack of the disease, and that this accounted for the frequency of heart disturbance. He thought that all these nervous symptoms were not true sequelæ but continuations of conditions which had existed during the primary attack. He related some cases of sleepy condition with bradycardia.

Professor CLIFFORD ALLBUTT (Cambridge), who said that he had not intended to take part in the discussion, insisted on the importance of correct diagnosis. He thought they ought to be extremely careful before asserting that any particular condition was the result of influenza, and that in many reported cases it was merely a matter of remote inference that such was the case. As an assistance in diagnosis he considered suddenness of attack a very valuable sign and instanced the case of a man who was seized while riding on horseback. With regard to the parts of the body most frequently attacked he agreed with the opener of the discussion that the anterior part of the brain was most frequently the seat of influenzal lesions and described a case under his own care where there had been very slight paralytic symptoms which disappeared but the patient remained aphasic, not when speaking slowly and deliberately but whenever he tried to talk fast. If there were certain areas preferentially attacked by the disease they ought to be ascertained. He doubted if it attacked weak points. He recommended lumbar puncture in meningo-encephalitic cases and bacterial diagnosis. He confessed that he was a pessimist in regard to prognosis in most of the cases under discussion.

Dr. NEWTON PITT (London) said that many cases of meningitis occurred in the early days of the influenza epidemic, but he was not sure that they were all due to the influenza bacillus. In one or two cases when it followed distension of the nasal sinus and antrum, &c., the bacillus had been found. In another a bacillus thought to be the diplococcus of Fraenkel was discovered but he would not like to say now that it might not have been the diplococcus intracellularis meningitidis. He referred to cases of influenza

which were quickly followed by enteric fever, and while thinking that the diagnosis was probably in many cases correct considered that the cases of meningitis were not more likely to be due to Pfeiffer's bacillus than these cases of enteric fever were. As a point in diagnosis he thought that in multiple neuritis due to influenza facial paralysis was more common than in others. He considered the affections of the heart to be due to disease of the nerves and not of the myocardium. He also thought that in many cases the irregularity of the heart's action was secondary and due to dilatation of the stomach produced by the original disease.

Dr. J. MACCORMAC (Belfast) doubted whether diphtheria was a specific infectious disease.

Dr. FRANK M. POPE (Leicester) related a case of the comatose type of encephalopathy in a boy in a large industrial school, and thought that in some cases injury might determine the point of incidence of the disease. In anosmia, where the nervous mechanism of the special sense affected was very close to the nasal mucous membrane where the poison entered, recovery was not likely unless it began early. He found that most of the cases following influenza that he had seen were in connection with the earliest epidemic, and thought the reason was that the people whose nervous system were likely to be affected were attacked on the first occasion and the less liable only remained, among whom, of course, in subsequent epidemics not so many cases were likely to occur.

Dr. S. K. MULLICK (London) thought motor nerves were more usually affected than sensory.

Mr. S. E. SOLLY (Colorado) related a case of hemiplegia in a young woman with aphasia which was almost certainly of influenzal origin and which ended in recovery.

Dr. R. SAUNDBY (Birmingham) considered that diabetes after influenza was a similar condition to diabetes occurring after any other acute disease and he regarded influenza as a fairly typical infectious process. As to the way in which the diabetes was produced he thought some cases might be due to a chronic interstitial pancreatitis.

MRS. GARRETT ANDERSON asked that diagnosis should be very carefully made. They were too ready to call everything influenza. Diagnosis, however, did not much help treatment in these cases. She inquired into the conditions which might intensify the poison of influenza, thought that such a series of cases as Sir William Broadbent had mentioned as having occurred on a training-ship showed that overcrowding intensified the poison, and had seen similar instances among crowded communities, such as schools and nurses' and servants' quarters. Prognosis must in most cases be based on the recovery rate.

Dr. W. EWART (London) spoke of the different aspects which such so-called system diseases as locomotor ataxia, Friedreich's disease, and spastic paraplegia presented when they were the effect of influenza as contrasted with their usual appearances. Instead of beginning gradually and increasing in severity the first influenzal forms began acutely and progressed, at all events for a time, towards recovery. He gave instances of several of such cases. He hoped that from that discussion they might learn something of how toxins affect the spinal cord and brain, and inquired whether in cases where nervous diseases come on some time after the initial disease there are not some bacteria still living and producing their toxin somewhere in the organism, nasal mucous membrane, or elsewhere, and suggested that an efficient cleaning was necessary here, as after diphtheria, lest the convalescent should be a disseminator of disease for some time after apparent recovery.

Sir J. W. MOORE called attention to the psychical state of influenza patients which makes them believe that they are the subjects of organic lesions and thought that many cases of post-influenzal nervous disorder were purely subjective. He agreed that most cardiac symptoms were of nervous origin and not myocardial.

Dr. ST. CLAIR THOMSON (London) agreed that anosmia was frequently curable. He doubted whether it was possible to apply stringent antiseptic proceedings to the nasal mucous membrane. It was naturally aseptic but he agreed that cleansing might be done.

Dr. W. CALWELL (Belfast) asked for statistics with regard to deaths during chloroform inhalation of persons who had recently had influenza.

The PRESIDENT considered the discussion suggestive and valuable. On the broad question he had no doubt that influenza was capable of producing and often produced the gravest changes in the nervous system. It might act in two ways. There was a class of disease which was revealed by influenza—i.e., the disease brought to light some flaw unsuspected previously. He quoted a case of tabes made worse by the disease. In the same way he believed that cases of melancholia and mania were due to the displaying of flaws in the mental apparatus. After all, this was only a small part of the question. They had to deal with the direct effects of a virulent poison on the nervous system. One point he thought had not been touched on which he considered an evidence of the toxæmic origin of the diseases mentioned. In early days he had written on syphilitic disease of the nervous system and had pointed out the bizarre arrangements of the symptoms of these diseases. They might see one leg paralysed together with the opposite arm, one eye and the opposite leg, and other such arrangements which they did not see in ordinary cases of disease from such causes as senile internal change or the like. Now this sign had been generally recognised as a sign of disease produced by toxins. Dr. Medin of Stockholm had reported an epidemic of anterior poliomyelitis where, together with the changes resulting from diseases in the anterior corneal cells, there were facial pain, hemiplegia, affections of the lateral columns, and other symptoms. Again, Dr. W. Pasteur had brought before the Clinical Society a similar epidemic and had asked if he was justified in regarding these cases as anterior poliomyelitis as other and remote structures were involved. Dr. Buzzard then quoted the case of a strong working man who, as the result of influenza, had double optic neuritis with complete optic atrophy, nystagmus, and paralysis of all four extremities, intentional tremor of one upper extremity, and loss of knee-jerks, showing that the toxin had affected widely separated motor and sensory neurons. Two similar cases were also given, in the latter of which a post-mortem examination had shown marked change in the vessels and ground substance in the floor of the fourth ventricle. He thought such anomalous conglomeration of symptoms pointed most strongly to the toxæmic nature of these affections. They could not cramp and confine the grave nervous diseases of influenza into ordinary terms. They must either largely increase their nervous terminology or else not use it in this respect. Systems of motor and sensory neurons must form the basis of their new nomenclature. The diseases of the nervous system due to toxins had largely increased in late years and they were not all due to influenza, there being a great many unlabeled toxins at work, but many had still the disease for their cause.

Dr. JUDSON BURY replied, and as an instance of the value of such a discussion he said that it was dogmatically stated in Leichtenstein's work on influenza, perhaps the best up to date, that the respiratory muscles were never affected in post-influenzal multiple neuritis, yet two such cases had been related in that room that day.

SURGERY.

WEDNESDAY, AUGUST 1ST.

The Presidential Address.

Mr. HOWARD MARSH, F.R.C.S., surgeon and lecturer on surgery at St. Bartholomew's Hospital, opened the work of the section with the following speech:—

It has been agreed that there shall be no formal addresses at the opening of the various sections. I think members will endorse this arrangement. It may be possible to make such addresses interesting and perhaps even instructive; but they are in no way a necessary part of your proceedings and they would encroach materially on the very limited time which is at your disposal for the proper business of the meeting—the reading and adequate discussion of clinical papers. A very few remarks, however, which have a direct reference to the work of the section may be really useful. On some previous occasions so many papers have been accepted for reading that many valuable contributions could only be hurried through in abstract and no discussion was possible. This was unsatisfactory to all concerned. On the present occasion the object has been to cut the garment according to the cloth; in other words, to adjust the number of papers to the time that is available, so that each may have a fair hearing and be fully discussed. I anticipate that all who are present will regard this as the proper method. Two set discussions have been arranged on subjects both of which I feel certain members will regard as well worthy of their attention. Subdiaphragmatic abscess is no doubt a somewhat

rare condition, yet it may occur in the practice of anyone. It is highly dangerous to life, and both in regard to diagnosis and treatment it presents difficulties of a very grave and embarrassing order. As the subject will be introduced by Mr. Godlee, and discussed by those whose names are a guarantee of their knowledge and sound judgment, I am sure that valuable information will be forthcoming. The subject of fractures belongs to a different order. It is so old and familiar that it may appear at first sight to be too hackneyed and barren to be worthy of your notice. On second thoughts, however, I believe that it will be felt that the opposite is really the case. Long a mere matter of routine, the treatment of fractures has lately felt the influence of modern advance in other departments of surgery. The Roentgen process secures an accuracy of diagnosis which formerly was often impossible. The aseptic method makes operative interference safe, so that when necessary it can be adopted without hesitation, and it has become obvious that to secure the best results treatment must be applied not only to the fractured bone itself, but to the neighbouring joint and the muscles and other structures of the limb. All these are points that present themselves, and I feel certain that Mr. Bennett's paper, on which I know he has expended considerable time and labour, and the ensuing discussion will be attended with practical results of very material value which will establish and disseminate methods of treatment which will largely promote the welfare of patients and the credit of this department of surgery. As to papers to be read I will merely venture upon one or two brief and, as I may term them, official remarks. The time allowed to each paper is 15 minutes, and to the discussion 10 minutes for each speaker. We must, as I have said before, cut our garment according to our cloth, and if one member of the section takes up more than his share of the cloth, those who follow him must go short, so that conciseness, which must not of course impair clearness of statement and completeness of argument, will be a blessing which we shall all thoroughly appreciate and greatly applaud, while as your humble servant I shall be spared the distress of curtailing remarks which, however weighty and to the point, are materially overstepping the allotted time.

Subdiaphragmatic Abscess.

A discussion followed on Subdiaphragmatic Abscess which was introduced by Mr. RICKMAN J. GODLEE (London), who pointed out that though the condition was rare yet it had lately been made the subject of a lengthy monograph by Prag. He mentioned that Maydl had classified the causes of subphrenic abscess under many heads, and he intended on the whole to follow the classification. In itself subdiaphragmatic abscess was not a disease but merely a by-product of some other disease. It was usual to speak of two varieties, an extra-peritoneal and an intra-peritoneal, but these two conditions presented very different symptoms and were associated with very different dangers. The best definition of a subdiaphragmatic abscess was "a collection of pus, with or without gas, between the diaphragm and the structures in contact with it." Mr. Godlee proceeded to give an elaborate and exact account of the anatomy of the under-surface of the diaphragm, detailing the relations of it with the contiguous viscera. He pointed out that the diaphragm should be regarded not as a single dome but as two domes, to a great extent separated by the projecting bodies of the vertebræ. It was also important to remember that a large portion of the under-surface of the diaphragm was not covered by peritoneum, but in immediate contact with the liver, stomach, spleen, pancreas, suprarenals, and kidneys. As to the symptoms of the disease there were none which could be described as pathognomonic. In the early stages there might be hiccough, a stitch in the side as in pleurisy, and friction. He considered that much benefit in diagnosis might be derived from the careful use of the stethoscope. The abscess might give rise to dulness at the lower part of the chest and might be accompanied by displacement of the heart. It might be diagnosed from pleurisy by the fact that the movements of the chest were not impaired, that the upper limit of the dulness was not so well defined as in a pleuritic effusion, and that the breath sounds might be heard below the upper level of dulness. Mr. Godlee mentioned that in emaciated persons it was frequently possible to see through the intact chest wall the lower border of the right lung ascending and descending during respiration. This sign, if present, would be quite against the presence of a pleurisy or pleuritic adhesions. If gas was present in the abscess (the so-called subdiaphragmatic pneumo-thorax) the bell sound might be readily elicited. The tympanitic note might reach upwards even as far as the second rib, and yet the respiratory movement of the chest was not interfered with. He proceeded to consider in turn the causes of the abscess. 1. *Stomach.*—If a gastric ulcer ruptured the pus might be localised, even though it had been poured out into the peritoneal cavity. In other cases the rupture might occur into the small sac. The symptoms in such a case would be very different from those met with in a case in which the perforation of the ulcer proceeded very slowly, so that the stomach had time to become adherent to adjacent viscera. These chronic abscesses burrowed greatly, and when accompanied by serous effusion into the pleura were likely to be mistaken for cases of empyema. 2. *Intestine.*—In these cases the abscess resulted from the rupture of a duodenal ulcer or an ulcer of the transverse colon. Pus and gas collected, pushing the diaphragm upwards, sometimes to a very great degree. There might be no dulness when the patient was lying down, but a tympanitic note; yet if the patient stood erect some dulness was evident at the lower part. In operating on these cases mere drainage might be sufficient, but sometimes it might be possible to close the opening in the bowel. 3. *Cæcum and appendix.*—When a subdiaphragmatic abscess followed on disease of the cæcum or appendix the original inguinal swelling might become less obvious. The abscess was usually on the right side, but it might occur on the left. The pleura might be perforated and an empyema might form. 4. *Hydatid.*—Suppuration of a hydatid cyst of the liver or spleen might simulate an empyema. 5. *Liver and bile passages.*—Many abscesses of the liver were really perihepatic and might perforate the diaphragm. 6. *Kidney.*—A perinephral abscess might be a true subphrenic abscess, and occasionally a greatly enlarged pyonephrosis might extend so far upwards as to simulate a subdiaphragmatic abscess. 7. *Subcutaneous injuries.*—The abscess sometimes followed a blow without a wound of the skin; in this case the blow had probably caused the rupture of a previously existing ulcer, just as the removal of a breast had been followed by perforation of a gastric ulcer. 8. *Wounds* might give rise to the abscess by the introduction of septic material. 9. *Metastases.*—Mr. Godlee thought it was a little difficult to be sure what Maydl meant by this class. 10. *Ribs.*—Caries or necrosis of the ribs might cause this form of abscess. In these cases the suppuration was really in the substance of the muscle, and might give rise to numerous sinuses. 11. Collections of pus in the thorax might make their way downwards, so that caries of the dorsal spine and inflammation of the mediastinum might cause a subphrenic abscess. 12. Under the last heading Maydl put "Various causes.' One of these was actinomycosis; it progressed very slowly, and it hardly gave rise to true pus. It was probably a much more common cause than was usually imagined. Surgical treatment was unsatisfactory. Tuberculosis, peritonitis, and disease of the pancreas were also rare causes.

Mr. BRUCE CLARKE (London) said it was difficult to lay down general rules for diagnosis. In some cases the diagnosis could only be made by recognising that the patient was suffering from some obscure illness and by excluding other conditions. He was inclined to believe that an ulcer of the stomach or intestine was by far the commonest cause. In the treatment of these cases much help was obtained by inserting one hand through a laparotomy wound; thus the exact relations of the abscess could be made out and the best position for an incision could be found. A case illustrating this point was related. He objected to "metastasis" being given as a cause; the expression "a septic condition" was much better.

Mr. L. A. BIDWELL (London) had had six cases. In four of these a diagnosis of empyema was made, and of these four cases three were caused by an ulcer of the stomach and the fourth by an ulcer of the colon. He considered that the pus in a subdiaphragmatic abscess had a peculiarly offensive odour by which it could be distinguished from an empyema.

MRS. STANLEY BOYD (London) read the notes of a case of subphrenic abscess which had commenced with vague gastric symptoms and for some weeks an exact diagnosis was not possible. Ultimately a correct diagnosis was made and the abscess was opened and drained and, so far as the abscess was concerned, the patient improved, but died a little later from ulcerative endocarditis.

Mr. FULLER (Cape Town) urged the importance of a

bacteriological examination of the pus removed from the abscess by an exploring syringe, for if the bacterium coli were found it would be greatly in favour of a subphrenic abscess and opposed to an empyema.

Professor CAMERON (Canada) related a case in which a subdiaphragmatic abscess burst into the general peritoneal cavity. Incidentally he mentioned that it would be desirable to have a word more philologically correct than "appendicitis."

Mr. FIRMIN CUTHBERT (Gloucester) mentioned a case in which a subphrenic abscess was drained. The patient had had the symptoms of gastric ulcer five years previously. In that case the hyper-resonance over the abscess was well marked.

Mr. R. C. CHICKEN (Nottingham) described two very interesting cases in which dulness in the left hypochondrium was caused by extreme thickening of the pericardium. In one of these there was an abscess under the diaphragm with a very tortuous sinus.

Professor LENNANDER (Upsala) mentioned a case of a man who received a severe blow on the right side from a carriage. The liver was pushed down by a liquid collection between the diaphragm and the liver; this was evacuated by an incision in the loin and it was found that the liver was torn. The fluid was found to be a mixture of blood, pus, and bile. The man recovered.

Mr. NOBLE SMITH (London) described two cases in which the subdiaphragmatic abscess was the result of caries of the spine.

Mr. GODLEE, in reply, expressed the opinion that many cases of so-called metastasis were really cases of direct extension of sepsis. He doubted the value of the smell in the diagnosis of these abscesses.

OBSTETRICS AND GYNÆCOLOGY.

WEDNESDAY, AUGUST 1ST.

After a few introductory remarks by the President of the Section, Dr. W. S. A. GRIFFITH (London), the first discussion on

Puerperal Fever in Relation to Notification

was opened by Dr. BERRY HART (Edinburgh). He recognised three forms of puerperal fever—viz. (1) the acute form associated usually either with serious laceration or ruptures of the genital tract, or with retention of portions of the placenta or membranes; (2) the lymphatic form; and (3) the venous form. As to the first form the difficulties of the labour would probably put the medical attendant on his guard. The second form was the most frequent, presenting the characteristic features of rigors and rapid pulse, high temperature, and in short the typical picture of sapræmia. The third or venous form was the most difficult to diagnose, inasmuch as it was simulated by typhoid fever, drain infection, &c. As to the "drain poison" so ably advocated by Dr. Playfair as a cause of puerperal pyrexia, he could only regard it as "not proven." Cases should be notified as puerperal fever where they had the clinical features of a general or threatened general pyæmia; sapræmic conditions, and localised septic pelvic conditions need not be notified. These definitions would, he hoped, meet the first of the objections made to notification—viz., the difficulty of definition of puerperal fever. Two other objections were met with—viz., the risk of misleading statistics due to errors in diagnosis, and the supposed unwillingness of practitioners to notify cases likely to end fatally. Of the first of these little was to be said, but as to the last there was no doubt that the notification of puerperal fever was always disagreeable to the practitioner, and yet on looking over the statistics of large towns, like Sheffield, London, and Leeds, he felt sure that notification was conscientiously carried out, since the notified cases considerably exceeded the number of actual deaths. The advantages of notification were, first, that it supplied information as to the frequency of this condition and of its tendency to increase or decrease; secondly, that it would help in prevention by putting the medical officer on the track of careless midwives or nurses. But notification was of little value unless accompanied by provision of hospital accommodation and isolation for bad cases. Proper laboratory equipment of such a hospital would be essential.

Dr. W. J. SMYLY (Dublin) said that it would be very important to know the extent of the mortality from puerperal fever in private practice; but this was a matter of great difficulty. As a matter of fact, the total returns of mortality in childbirth were of more scientific importance than the cases notified as "puerperal fever," for the latter returns were apt to be vitiated by variations in definition. In the Registrar-General's returns there were three classes of deaths reported: (*a*) deaths from metria; (*b*) deaths from accidents in childbirth; and (*c*) deaths due to causes not directly connected with childbirth. The greatest difference of opinion would be found in relation to the third group, because cases reported as due to rheumatic fever, typhoid fever,, scarlet fever, &c., after parturition might well be considered as being really, in some instances, cases of puerperal fever. The term puerperal fever was an anachronism; there was no such thing as a specific "puerperal fever," since fever after childbirth was merely a form of sepsis. The great difficulty was to know which cases should be notified. Dr. Berry Hart had said that cases of general infection should be notified but that it was not necessary in the case of local infection. But why not? Was not local infection also apt to be dangerous as a source of infection? And then why should they stop at puerperal sepsis? Why not notify all cases of sepsis occurring after surgical operations. As a matter of scientific value notification did not promise much, but as a matter of prevention of puerperal fever it might be of some value by inducing greater care and acting as a check. The popular view of puerperal fever was very different from the scientific one. According to the former it consisted in a kind of malign influence which became attached to a medical man, causing him to carry infection to every woman he attended; consequently notification would in many cases mean great injury to medical practitioners, if the words "puerperal fever" were used. It would be better to use the simple word "septicæmia."

Dr. JOHN CAMPBELL (Belfast) also thought that notification of puerperal fever as such would, in the present state of public opinion, lead medical men into great trouble with their patients and their friends, for the popular view was that puerperal fever was due to the fault of the medical man or the nurse. Consequently, while notification would be a good measure some means should be taken to safeguard the practitioners. His own view was that medical men were responsible for puerperal fever in only a small proportion of cases; the infection being generally conveyed by midwives. He knew of a case where a medical man attended a woman, using all possible precautions, yet she contracted puerperal fever. Three months later the medical man found that the daughter of the midwife was sufferiug from gonorrhœal ophthalmia, and that at the time of the confinement the midwife, who had made several examinations of the patient, was douching her daughter for gonorrhœal vaginitis. He believed that in a fair proportion of cases puerperal fever was due to antecedent conditions in the patient herself—e.g., gonorrhœa contracted before delivery. One important point in connexion with notification would be greater control of midwives and the education of the public.

Dr. ROBERT BOXALL (London) joined issue with Dr. Campbell in regarding the disease as at all likely to arise from disease pre-existing in the patient herself. This at least was the conviction forced upon him by the results at the General Lying-in Hospital where no case of sepsis had arisen during the last 12 years. Owing to the difficulty in deciding what should or should not be included under the term "puerperal fever" he agreed with Dr. Smyly that all cases of septicæmia, whether local or general, should be notified. for a mild form in one patient might be quite capable of setting up a violent form in another.

Dr. A. V. MACAN (Dublin) said that public notification of puerperal fever appeared to him to be out of the question until it became the rule of the profession to tell the patient and her friends when the case was one of puerperal fever. It was well known that at present this was usually not done. The use of notification generally was either for the good of the patient herself or to prevent the spread of the disease to others. The first object could hardly be hoped for in the case of puerperal fever, for unless the patient were removed from the charge of her medical attendant, no change could be made in the treatment or surroundings. As to the second object, if the practitioner were acquainted with modern antiseptics, he would not require notification to prevent the spread of the disease, and unless they had compulsory powers over midwives they could not compel them to cease practice. The great *desideratum* at present

was the better training of midwives. He believed that at the present time it was the rarest thing to find a trained midwife in country workhouses and country districts in general. As to auto-infection, while quite believing in its occurrence, he regarded it as so exceedingly rare as to have no practical influence on the percentage of puerperal mortality. In his opinion the first step should be to train both medical men and midwives more thoroughly, and not to adopt compulsory notification.

Professor J. W. BYERS (Belfast) pointed out that the great argument in favour of notification was that by its means the prevention of the disease might be hoped for. The definition of puerperal fever was a very difficult matter; but on the whole Dr. Berry Hart's broad definition might be accepted. Bacteriological examination was of great value in forming a diagnosis. Dr. Campbell had said that cases of auto-infection formed a large proportion of cases, but this was not his own view; on the contrary, he thought that they were of comparatively rare occurrence, as was shown by the statistics of lying-in hospitals and by the fact that the majority of cases of puerperal fever were met with in primiparæ, and that patients who were not examined vaginally hardly ever contracted puerperal fever. The mortality from this disease might be diminished, first, by teaching students and midwives the importance of abdominal examination; secondly, notification, for this would teach all concerned, on reflection, that in the great majority of cases the disease could be prevented.

Mr. JAMES GREEN (Portsmouth) asked what degree of pyrexia and what period of its onset after delivery would mark a case as a suitable one for notification. His own view was that a temperature under 100° F. would not need certifying, nor would a case coming on a week or more after delivery. As to personal asepsis on the part of the medical attendant, he found absolute certainty very difficult to secure.

Dr. R. BRUMMITT (South Australia) spoke of the conditions that existed in that colony, where the responsibility of notification rested with the medical attendant. Any statistics of cases of notification were of little value because of the differences of opinion as to what constituted puerperal fever.

Mr. J. H. TARGETT (London) thought that the object of notification should be the provision of proper nursing and treatment of the affected case, and if necessary its removal to an infirmary when the circumstances of the patient required it. In his teaching of the students he always impressed upon them the importance of the medical attendant taking upon himself the responsibility in every case of puerperal fever.

Dr. MICHAEL BEVERLEY (Norwich) considered that the main reason for the notification of puerperal fever was that it was a preventable disease and that notification would be the best means of stamping it out.

Dr. ARTHUR HELME (Manchester) took exception to Mr. Targett's attitude in instructing the students that when puerperal fever developed the student and the nurse were responsible. It had been so persistently explained to the public that in the matter of puerperal fever the practitioner was the sole and blameworthy cause that at the present moment in many districts to tell the friends that the patient had puerperal fever would permanently injure the practitioner. Whilst it was true that in most cases puerperal fever was due to infection from without it was equally true that in a large number of cases the source of infection was within the patient herself, hence if notification was to be adopted it was important that the erroneous popular view that in every case of puerperal fever the practitioner in attendance was practically a criminal should be combated.

Dr. HENRY BRIGGS (Liverpool) pointed out that puerperal fever should be regarded as surgical fever and that the modes of prevention of the one and of the other were identical. Much in the success of treatment depended upon early diagnosis, and if this were attended to notification was unnecessary. He advocated the provision of isolation wards as a supplement to notification.

The PRESIDENT considered that in the matter of puerperal fever, the only course open to the medical practitioner was to be candid with the patient's friends. He could not suppose that, as some of the speakers apprehended, the practice of the medical attendant would be seriously affected by such a course; every man who had done his work conscientiously would surely receive sufficient support from his patients to avert such dire consequences of a single unfortunate case. He read an extract from a communication from the Local Government Board pointing out that "the object to be attained in so far as preventive medicine is concerned, is to bring to the knowledge of the sanitary authority all those conditions which, supervening upon parturition, are communicable from one parturient woman to another. He also quoted the statement of a medical officer of health that his experience of notification had been disappointing, inasmuch as the deaths from puerperal fever in one or two years had been in excess of the notifications in his district; and that except for disinfection of bedding at the end of a case, the intervention of the medical officer of health was seldom necessary.

After a brief reply by Dr. BERRY HART, the following motion was proposed by Dr. BOXALL, seconded by Dr. BEVERLEY, and carried *nem. con.*

That it be a recommendation to Council that in the opinion of this meeting it is desirable that notification of puerperal fever (septicæmia) should be adopted generally.

STATE MEDICINE.

WEDNESDAY, AUGUST 1ST.

Dr. J. C. THRESH, medical officer of health to the Essex County Council and Lecturer on Public Health at the London Hospital Medical College, delivered a

Presidential Address

entitled Some Problems in Rural Sanitation. He said: One of the most interesting problems which has engaged the attention of scientists during recent years is that of the period for which man will continue to live upon this earth. There is a general consensus of opinion that a time will come when the earth will cease to be habitable, but there is a wide divergency with reference to the length of the period which will elapse before the human race disappears. There are those who think that some great catastrophe may terminate our existence at an early period, others calculate that we are using up the available oxygen in the atmosphere so rapidly that in the course of two or three centuries there will not be sufficient left to support life. At the opposite extreme we have those who teach that man may continue to inhabit the earth for the millions of years which will elapse before the cooling process solidifies all the water on the globe. These speculations, however interesting, have little bearing upon public health, but there are other questions somewhat analogous in character which sanitarians will have seriously to consider. One of the most important is the continued increase of population, an increase almost exclusively confined to towns and cities. The effect of over-population is well exemplified in the two countries in which the population has attained its maximum density, India and China. The result is periodic famines, generally associated with pestilence in some form, affecting wide areas and millions of people. The earth's population is increasing steadily and in certain countries with great and continuously increasing rapidity. The production of food cannot for any very long period keep pace with the increase of population, and it may be that famine and disease will more and more frequently occur and keep down the population within the limit of the available food supply. The growth of the large manufacturing centres with the influx of rural labourers into towns, and the general neglect of purely agricultural pursuits, must in this country produce some marked effect. That this effect will conduce neither to increased health nor to longevity can scarcely be denied; hence it is a result which we must deplore. The country has already reached a condition in which the population far exceeds that which can be fed by its produce, and the condition is being aggravated year by year by the increasing population and continuous neglect of agriculture, and I am afraid will continue until we receive a rude awakening, an awakening which in all probability will stagger humanity.

Our purely rural population is slowly decreasing, our urban population is rapidly increasing; therefore year by year the feeding problem becomes more serious. This is a fact so well recognised that its very familiarity is producing contempt. It is well, however, that we should from time to time be reminded of the fate upon which we appear to be almost blindly rushing. Sanitary improvements unfortunately tend only to aggravate the evil and hasten on the day of reckoning. So much attention has been devoted to urban sanitation that the town dweller enjoys now many

advantages not possessed by those who remain in the country, advantages which tend to prolong life, increase health, and, generally speaking, make life better worth living. For example, in most of our towns every house is efficiently drained and abundantly supplied with pure water, rendering it possible, with the minimum of trouble, to keep a house and its surroundings sweet and clean and therefore healthy. In our villages and rural districts nuisances from the improper disposal of filth abound on every side and the water-supplies too often are unsatisfactory in quality as well as in quantity. Land is going out of cultivation and decreasing in value, yet it is often impossible to obtain a small quantity to effect sanitary improvements. Let a plot be required in order to provide cottages with ground upon which to dispose of the slops and house refuse, or for the erection of better houses for the labourer, or for the erection of an isolation hospital, and it is often almost impossible to obtain it. Land-owners refuse to sell small areas for such purposes, yet, in my county at least, farms are sold at ridiculously low prices and the speculator who purchases, recognising the demand for small plots, promptly cuts up the farms and sells the land at an enormous profit. The dog-in-the-manger policy so common amongst land-owners and their agents I cannot account for, but it is a fact which is well recognised and deplored. How to bring back people to the land is one of the greatest problems of the age. It is far too large a subject for me to dwell upon, but I am convinced that one of the chief requirements for restoring prosperity to our rural districts is increased facilities for acquiring small areas of land for sanitary improvements. With a sufficiency of land adjoining or near each house the necessity for sewers in most of our rural districts would be avoided, though in compact villages urban in character drains and sewers will still remain a necessity. The supply of water to our cottages is even a greater difficulty. Sanitary authorities are not only averse to the expenditure necessary to provide a public supply, but too often also averse to causing landlords to provide such a supply when it can be done at what is defined by Act of Parliament as a reasonable rate. Another very important requirement, I might almost say the vitally important requirement, is decent cottages for our rural labourers. Many Acts of Parliament have been passed having for their object the better housing of the working classes. Their utility in rural districts has been practically *nil*. We shall welcome the discussion on this subject, which will be opened by my friend Dr. Tew at one of the meetings of this section. The effect of the present defective accommodation upon the mental, physical, and moral well-being of the inhabitants is too well known to need repetition. The housing problem is of importance not only to the rural labourer but to the whole country, and should be treated as a national problem. My apology, if any is needed, for touching upon these questions relating to rural sanitation in my opening address is that we are meeting in a large agricultural centre, in the centre of a group of rural counties in which these subjects are of the deepest interest, and that I, as medical officer of health of one of these counties, am myself more particularly interested in their study and am desirous of doing what little I can towards improving their sanitary condition and bringing about a new era of prosperity.

Rate-supported Sanatoria for Consumption.

Dr. NATHAN RAW (Liverpool) read a paper on this subject in which he dealt specially with household infection. Phthisis was essentially a chronic disease that could not be stamped out by legislative action. The education of the public was a necessary preliminary. From the facts of the case the consumptive poor would have to be cared for at the expense of the rates. Existing Poor-law institutions were unfitted for the treatment of such cases. The Liverpool and Toxteth Unions formed a joint tuberculosis committee and secured a site upon the Dee at an elevation of 650 feet to be used for early curative cases only. Fresh air and sun were the only cures known at present. Notification and free disinfection were desirable. The erection of public sanatoria was mainly one of municipal enterprise. Within a few years it would probably be difficult for a consumptive to obtain employment.

Dr. COOPER PATTIN (Norwich), Dr. ALFRED HILL (Birmingham), Dr. D. OLDFIELD (London), Dr. J. GROVES (Carisbrooke), Dr. H. PECK (Chesterfield), Dr. GRÜNBAUM (Liverpool) Dr. C. MACFIE (Bolton), and Dr. THRESH (Chelmsford) discussed the paper, and Dr. RAW replied.

PSYCHOLOGY.

WEDNESDAY, AUGUST 1ST.

Dr. PERCY SMITH (London) in his Presidential Address, referred to the subject of the Prevention of the Causes of Insanity. These comprised the marriage of the neuropathic and hereditary transmission, alcoholism, and syphilis. He pointed out the ways and means of prevention that should be brought into operation so that the recent and alarming increase of insanity should be checked.

A vote of thanks was proposed by Dr. MACDOWALL, seconded by Dr. SOUTAR, and carried unanimously.

Dr. MACNAUGHTON-JONES (London) opened a discussion on the Correlations between Insanity, Vice, and Crime, and pointed out the importance of coöperation between the alienist and the gynæcologist. The discussion was continued by Dr. SOUTAR, Dr. BERNARD O'CONNOR (London), Dr. WYNN WESTCOTT (London), Dr. PERCY SMITH, Dr. SEYMOUR TUKE (London), and Mr. CARDEW.—Dr. MACNAUGHTON-JONES then replied.

Dr. E. S. PASSMORE (London County Asylum, Banstead), read a paper on Epileptoid Mania or Psychic Mania, and instanced cases in support of the view that many cases regarded as recurrent non-epileptic mania were really epileptic in character.

The paper was discussed by Dr. OLDFIELD, Dr. LLOYD ANDRIEZEN (London), Dr. MACNAUGHTON-JONES, Dr. PERCY SMITH, Dr. SOUTAR, and Dr. MACDOWALL, and Dr. PASSMORE replied.

The meeting then adjourned till the next day.

PHYSIOLOGY.

WEDNESDAY, AUGUST 1ST.

The proceedings of this section opened with a debate initiated by the President, Dr. W. D. HALLIBURTON (London) upon the Formation and Excretion of Uric Acid in Health and Disease.

Dr. A. HAIG (London), Dr. T. H. MILROY (Edinburgh), Dr. F. G. HOPKINS (London), Dr. W. J. SMITH JEROME (Oxford), Dr. J. HADDON (Denholm), Dr. HARRY CAMPBELL (London), and Dr. R. J. ANDERSON (Galway), took part in the discussion.

Papers were then read by Dr. J. HERBERT PARSONS (London) upon the Dilatation of the Pupil from Cortical Stimulation, and by Professor E. WACE CARLIER (Edinburgh) upon Changes occurring in the Cells of the Newt's Stomach during and after Secretion.

PATHOLOGY.

WEDNESDAY, AUGUST 1ST.

Dr. E. E. KLEIN, Lecturer on General Anatomy and Physiology at the Medical School, St. Bartholomew's Hospital, delivered the following short

Presidential Address.

Pathology in its analysis of the nature of the tissue changes has been influenced, it is admitted, to a not inconsiderable degree by the progress made in bacteriology within the last two or three decades. Pathology no less than, and in no way different from, other biological sciences, intent on answering the "what," as also the "why," asks not merely what is the intimate nature of a particular change and aberration of a tissue or organ from its normal or physiological state, but also, and in a higher degree, why this change, and what its cause? Why a particular alteration in one, another in another instance? Microscopical and experimental analysis have both been active in discovering some fundamental facts, but have left numerous gaps in this study, and it is by the aid of bacteriology—since it became, thanks to the foundations laid by Koch, an exact science—that these gaps are being closed up, or at any rate that the manner and method are indicated by which these gaps may, and probably will, be filled up. The time at my disposal does not permit of more than illustrating these propositions by a few of the more striking examples.

1. *Inflammation.*—For more than a century inflammation, by the aid of the improved microscope and by experimental work which had occupied a host of active minds and of great experimentalists, was being analysed in all its elements—the part that the vascular system, that the tissues, that the nervous mechanism play in establishing the peculiar alterations constituting the phenomena of inflammation, suppuration, and

their sequelæ; thereby an enormous number of facts were brought to light, by which the understanding of these particular aberrations from, and return to, the normal conditions became clearer, or were believed to have become well understood. It is now admitted, however, that with the exception of traumatic, thermic, and chemical agencies, the chief, if not the sole, cause of the changes of the vascular apparatus and the surrounding tissues constituting inflammation, inclusive, of course, of suppuration, are micro-organisms, which either by their chemical activity—producing substances which exert a toxic action on the vascular system or the tissues, or both—or by the toxic nature of the protoplasm of the microbes themselves lead to the abnormal interaction between the vessels and the tissues, manifesting itself in the exudation of fluid and formed elements of the blood and the progressive or retrogressive changes of the tissue elements themselves. It is one of the best-proved acquisitions in bacteriology that many microbes, either when growing and multiplying outside or within the tissues, produce toxins which in the tissues set up the phenomena of inflammation either locally or generally. This applies not only to those microbes which are specially and in the narrower sense connected with suppuration and abscess—for example, various species of pyogenic staphylococci, streptococci, and bacilli—but also to other specific pathogenic microbes like the diphtheria bacillus, the tubercle bacillus, tetanus bacillus, and typhoid bacillus. Koch's tuberculin, the diphtheria toxin, and the toxins of many other microbes produced in the test tube and then injected into the tissues produce typical inflammation. The same has been shown of the dead protoplasm of many microbes—for example, tubercle bacillus, cholera vibrio, bacillus pestis, and others, as also of some ordinary saprophytes—namely, that the dead bodies of these microbes contain pyrogenic and pyogenic substances capable of producing typical inflammation. Another set of phenomena of which an explanation is supplied by bacteriology is one well known in the study of inflammation—that is, the greater or lesser number of leucocytes in some inflammatory foci. It is well known that while some inflammations are characterised by copious transudations with few leucocytes, others, on the other hand, are associated with copious accumulation of leucocytes, as in suppuration. The phenomenon of chemotaxis seems to offer a good explanation for these differences; that is to say, while some microbes or their toxins powerfully attract leucocytes from the blood and connective tissues, others have no such effect or possess even the reverse—namely, negative chemotaxis. In a similar manner Pfeiffer first classified the effects of chemical substances on lower organisms.

2. *Necrosis.*—The most valuable and earliest observations were those of Roux and Yersin, showing that the toxin produced by the diphtheria bacilli has a powerful necrotic action on the tissues. The further demonstration of the actual presence of the toxin in the diphtheritic membrane supplied at once the simplest and most feasible explanation of the necrotic condition of the mucous membrane in diphtheria—namely, the multiplication of the diphtheria bacilli at a particular locality—be it the fauces or larynx, or trachea or bronchi, or any other membrane—causes the production of the toxin, which in its turn causes the inflammation, and further the necrosis, of the membrane. But this action—namely, localised inflammations leading to gradually progressing necrosis of the tissue elements—is not peculiar to the diphtheria bacilli and their toxins, for it is almost a common character of many, if not most, pathogenic microbes; it is observed in connexion with almost all hitherto known pathogenic bacteria, tubercle, glanders, leprosy, pseudo-tubercle, pathogenic cocci, and bacilli of various kinds. It is this progressive necrosis of the tissue following the typical symptoms of inflammation—congestion, stasis, diapedesis, and emigration of leucocytes—which is observed, granted the necessary number and virulence, as the effect of the action of many pathogenic microbes; inasmuch as at a particular locality primary as well as secondary foci are found, so long as their multiplication proceeds and their toxins are being produced, and thus the necrosis of the tissue spreads into larger and larger areas. In non-microbic inflammations, on the other hand, this necrosis is local and circumscribed, being due to the direct action of the noxious agent—thermic, chemical, or traumatic—and its action is limited to the part actually attacked or its immediate surrounding. The necrosis itself appears in both series, however, of the same essential character—namely, coagulation of the protoplasm of the tissue cells, inclusive of the vessels themselves, and a gradual disintegration and destruction of the cells as also of the intercellular ground substance. These phenomena have been well observed in the case of a number of pathogenic microbes. Another not less important set of appearances associated with the necrotic change caused by bacteria is the secondary leucocytosis and suppuration; and for this the chemotactic action that the necrosed tissue exerts on leucocytes, attracting these for one reason or another, probably as scavengers and removers, offers a ready explanation.

3. *Specificity of cell secretions.*—Until recent years it was generally considered that a specificity of cell secretions was one of the fundamental phenomena of the physiological or normal tissues. Behring, Kitasato, Brieger, Roux, Ehrlich, and many others have, however, shown that under the activity of many pathogenic bacteria and their toxins in an affected body a curious and important series of secretions on the part of the cells of the tissues takes place which is as specific as those others associated with the normal life—I mean the production of specific antitoxins and the production of specific agglutinins. It was further shown that not only under the stimulation of the cells by bacteria and their toxins are those specific antitoxins secreted, but that organic substances like abrin, ricin, and venin are capable of stimulating the cells to a like production of specific antitoxin. Moreover, quite recently a further highly interesting series of facts have been brought to light—namely, that particular tissue taken from one animal body and introduced into another causes a specific reaction, showing itself in this, that the living cells of the latter produce under the particular stimulation substances specifically acting on the particular tissue that has caused the stimulation.

A discussion was then introduced by Dr. F. W. ANDREWES (London) upon

The Pathological Distribution of Bacillus Diphtheriæ and the Bacteriological Diagnosis of Diphtherial Infection.

Dr. ANDREWES pointed out that the bacteriological diagnosis of diphtheria was required for two purposes—for the purpose of clinical diagnosis and for strictly scientific purposes, such as the demonstration of the diphtheria bacillus in the throats of healthy persons. In the latter case a rather prolonged investigation, extending perhaps over many days, might be required before the identity of the bacillus could be satisfactorily established. For clinical purposes a diagnosis was required within 24 hours, and for his report the bacteriologist had to rely mainly on the microscopic appearance of the culture. This was not sufficient by itself for the positive identification of the bacillus, and the report sent to the physician merely meant that a bacillus morphologically resembling the diphtheria bacillus was present in the patient's throat. With that additional fact in his possession the physician must then consider the clinical features of the case and form his own diagnosis. Under the conditions in which the diagnosis was required it was impossible to place the onus of making a diagnosis on the bacteriologist without affording him sufficient time to complete his investigation.

In the discussion which followed the PRESIDENT, Professor MUIR, Mr. W. M. CROWFOOT (Beccles), Dr. LISTER, Dr. LAZARUS-BARLOW (London), took part, and the conclusions formulated by Dr. Andrewes were accepted by all the speakers.

Professor MUIR read a paper On a Case of Serious Anæmia and Purpura Associated with Great Deficiency in the Red Bone Marrow.

Mr. ROGER WILLIAMS (Clifton) read a paper On the Pathogenesis of Myoma of the Uterus, and Dr. JOHN EYRE read a communication On Nutrient Media of Standard Reaction.

The proceedings of the section were adjourned until the following day.

OPHTHALMOLOGY.

WEDNESDAY, AUGUST 1ST.

An opening address was delivered by the President of the Section, Dr. W. A. BRAILEY (London), upon the subject of Ocular Headaches, after which a paper was read by Mr. RICHARDSON CROSS (Bristol) upon the Treatment of Chronic Glaucoma, when a debate ensued in which Dr. J. HERN (Darlington), Mr. WORK DODD (London), Dr. K. A. GROSSMANN (Liverpool), Mr. G. A. BERRY (Edinburgh), and Mr. DEVEREUX MARSHALL (London) took part.

DISEASES OF CHILDREN.

WEDNESDAY, AUGUST 1ST.

The proceedings in this section were well attended. After a few brief introductory words from Dr. F. TAYLOR (London), the President, the first subject for debate, the Nature and Varieties of Pneumonia in Children, was introduced by Dr. NESTOR TIRARD (London). Dr. LORIMER HART (London), Dr. NICOLAYSEN (Christiania), and Dr. A. M. GOSSAGE (London), took part in an interesting debate which followed.

PHARMACOLOGY AND THERAPEUTICS.

WEDNESDAY, AUGUST 1ST.

Dr. WALTER G. SMITH, King's Professor of Materia Medical School of Physic, Trinity College, Dublin, and Physician to Sir P. Dun's Hospital, gave a short

Presidential Address

on the subject of the Teaching of Pharmacology. The rise and growth of the science of pharmacology, he said, which was founded by Bichat and Magendie early in the century, has made it plain that all correct appreciation of the mode of action of drugs must be based upon physiology and pathology. The new departure has gradually leavened our conceptions of therapeutics and renders the teaching of this branch alike more intelligible to the student and more satisfactory to the teacher. I well remember the time when attendance upon materia medica lectures was a dreary enough obligation, and the course was to students perhaps the least popular in the entire curriculum. Comparing the teaching of materia medica and therapeutics 30 years ago with the present time three features stand out prominently: (1) the retrogression of descriptive materia medica in its restricted meaning; (2) the establishment of special courses in practical pharmacy at the medical schools, conducted in suitable laboratories; and (3) the development of pharmacology in its present acceptation—that is, the scientific investigation of the modes of action of drugs. In regard to the place of pharmacology in the medical curriculum and the best mode of teaching medical students I heartily join with Dr. J. B. Bradbury (Address to Section of Pharmacology and Therapeutics, Portsmouth, 1899) in protesting against undue neglect of what may be termed old-fashioned materia medica—that is, description of the *essential* properties and chemical nature of drugs—so far as these elucidate the action of the remedy or its relations to prescribing. A modern course of lectures on materia medica should most certainly be founded on the bed-rock of pharmacology—that is, physiology; but there is still room—nay, I think, necessity—for practical demonstration of the physico-chemical properties of drugs, and we need not even be ashamed of inculcating the utility of some familiarity at least with the pages of the British Pharmacopœia which it is the fashion of some to despise or decry.

Thanks to the labours of physiologists and pharmacologists on the one hand and of organic chemists on the other hand, it is now possible, and even comparatively easy, to give an interesting and practically useful course of lectures on materia medica and therapeutics to medical students, but not earlier than their third year. I venture to affirm that it is entirely the fault of the lecturer and not of his subject if he does not succeed in quickening the dry bones of materia medica and in awakening and maintaining the lively attention of his class. With a little thought and trouble numerous simple experiments, chiefly chemical, can be shown in illustration of the more important physiological and therapeutical properties of drugs. General principles can be laid down, alliances pointed out, and broad features sketched which connect together large numbers of drugs, into the individual details of which it would be wearisome and a waste of time to enter. Take, for example, antipyretics and their mode of action; or the local action of astringents and caustics, experimentally illustrated by the reactions of various acids and metallic salts upon solution of albumin. Or, again, the group of "aromatic compounds" where it is possible to give a brief but comprehensive survey of the general chemical and physiological relations of the subdivisions of this great group—namely, hydrocarbons, phenolic compounds, acids, and nitrogen derivates (alkaloids, &c.). And in this aromatic group, which includes the antipyretic drugs, there is abundant opportunity for drawing attention to many interesting points in illustration of the connexion between physiological action and chemical constitution.

Since the properties and motions of molecules which determine physical properties depend upon the motions and properties of atoms which determine chemical reactions, the same common laws must govern both physical and chemical phenomena; and no one can doubt that the properties of the most complex compounds depend upon, and are intimately correlated with, the properties and configurations of the atoms and molecules of which the aggregates are built up. This fascinating subject, which received its impetus in Great Britain from the labours of Crum Brown and Fraser, has not escaped the attention of former speakers at meetings of this Association, for at the Brighton meeting of 1886 Sir T. Lauder Brunton delivered an attractive address on the Connexion between Chemical Constitution and Physiological Action; and Sir W. Broadbent upon more than one occasion (in 1890 and again in 1895) has likewise referred to this topic which he rightly esteems as one of fundamental significance. Bit by bit—here a little, there a little—we are gathering the kind of material which can best help us to gain insight into the principles of therapeutics. True, we may have to wait a good while before a stately edifice can be built up, but none the less does it hold true that the problems of therapeutics, and for that matter of all biology, are, at the root of things, essentially chemical or physico-chemical, in so far as we are at all able to interpret them or refer them to general laws. Within the last 15 years the remarkable and daring theories of Van't Hoff and his followers upon the nature of dilute solutions, based upon certain physical data—namely, osmotic pressure, alterations of the boiling-point and freezing-point—together with Arrhenius's hypothesis of ionic dissociation have largely engaged the attention of physicists and chemists. Nor have they failed to make their impress upon pharmacological investigations. The earliest reference I have noted in pharmacological work to Van't Hoff's important researches is contained in a paper by Hofmeister.[1] In the same journal[2] is a suggestive paper by Dreser, "Ueber Diurese und ihre Beeinflussung durch pharmakologische Mittel."

One word in conclusion. The flood tide of discovery of new synthetic chemical remedies has, together with a few treasures which have risen on its crest, also washed on shore much rubbish of a pseudo-scientific sort. Are we not daily worried with samples and with advertisements and circulars from eagerly competing firms announcing new drugs or novel combinations which I fancy are used chiefly by those who do not know how to employ the old ones? Scarcely are they advertised once before they are elbowed away by importunate new-comers. The advertisement is headed with an enigmatical name, standing over an appalling chemical formula, and probably ornamented with a structural or graphic diagram. All this is backed up by a plausible show of original experimental work and ends with a "full literature." In a pamphlet lately issued about some new-fangled preparations of iron 62 literary references were appended and a well-known and reputable drug firm advertised in a recent number of the *British Medical Journal* more than twenty of its special preparations, some of which probably most of us never heard of. And not only are we plagued with innumerable circulars which choke our waste-paper baskets, but we are tormented during our consulting hours at home by the visits of smooth-tongued touting agents of many of the large firms. This most objectionable practice is on the increase. It should, in my humble opinion, be stamped out by the medical profession, and I avail myself of this public opportunity to protest against it. For some time past I have made it an invariable rule, and given directions accordingly, that I will not receive or interview the agent or representative of any drug firm, no matter how famous. If by chance or sheer audacity one of these gentry does find his way into my consulting room he very speedily finds his way out again.

[1] Zur Lehre von der Wirkung der Salze, Archiv für Experimentell Pathologie und Pharmakologie, Band xxv., 1889.

[2] Band xxix., 1892.

LARYNGOLOGY AND OTOLOGY.

WEDNESDAY, AUGUST 1ST.

Presidential Address.

The President of this section, Dr. SCANES SPICER, in his opening address, after welcoming those attending the

section and thanking those who had undertaken to introduce the discussions and offer papers for consideration, went on to say:—

Again, in 1900, we have a combined Section of Laryngology and Otology, in which arrangement, I think, the Council of the Association have acted wisely. Except when we meet in the largest centres, or on special occasions like international congresses, it is not easy to secure a sufficiently large attendance to make two sections profitable. Then, nearly all the present generation of specialists in throat, nose, and ear diseases practise all divisions, and there can be no doubt that the field of work and the chief questions of interest are the same to us all. Further, it appears to me that the sections of the British Medical Association annual meeting are intended not only for specialists but for the much larger number of practitioners who feel attracted to our subjects, and that we shall more effectually secure the diffusion of knowledge and interest by the consideration of broad questions common to both branches rather than of minute and unsettled problems peculiar to either laryngology or otology, more appropriately dealt with at the special societies and larger congresses.

In comparing the status of the specialist in the past with that of the specialist of to-day the President remarked upon the startling rapidity with which the evolution of the special study of diseases of the throat, nose, and ear had taken place, and predicted that it would not be long now before laryngology and otology would take full rank in all university and qualifying tests. He reminded his listeners that on the Continent and in America the universities had given to this specialty and its professors a recognition equal to that of any other branch of medicine or surgery. He then briefly reviewed the reasons for regarding nasal stenosis, obstruction, or insufficiency as a pre-eminent factor in the etiology of catarrhal processes of the throat, nose, and ear, and continuing, said:—

That the results of nasal obstruction are being gradually recognised is evidenced by the fact that it is now no uncommon thing to have cases of obstruction of the most diverse character sent for the adenoid operation in which the post-nasal adenoid hyperplasia element is absent or insignificant. This implies that the symptoms of obstruction as seen in one of its commonest forms are by some erroneously supposed to be due only to adenoids. It is by no means derogating from the claims of William Meyer to our gratitude if I suggest that in most cases of adenoids the post-nasal adenoid hyperplasia is only a part, and often a small part, in the pathological condition of the so-called adenoid child; that fractured and deflected bones and cartilages, turbinal enlargements, hypertrophied tonsils pushing up and growing up behind the soft palate, stunted nostrils, and even vaulted palate are often far more important features in the case at the time of examination than the post-nasal adenoid hyperplasia. The failure to recognise this or to act upon it is the cause of the unsatisfactory results which sometimes ensue if the practitioner has undertaken to bring about a cure by simply removing the adenoids. Hence the discredit and suspicion which have often surrounded the question of adenoid operations and an explanation, at the same time, of the most common factor in a recurrence. I believe the truth to be this: In many children with nasal obstruction no formal adenoid operation need be done with an anæsthetic—and its risks are not *négligeable* unless under special circumstances—if the other factors in the obstruction are attended to. I have no hesitation in estimating that many hundreds of adenoid operations are done unnecessarily in this country every year when adenoids are not present, or if present are only an insignificant element in the obstruction which depends mainly on other causes. The result of this is a complete absence of relief of the symptoms of obstruction or only a slight and temporary improvement by the adenoid operation. The question which we should put to ourselves is this: Is it the mere presence of the adenoids or the impeded breathing which leads to the arrested evolution evidenced by the so-called "adenoid physiognomy," the alar collapse, the stunted nostrils (persistence of infantile condition), the vaulted palate and crowded teeth, the "drawn" eyes, and the deformed chest? The answer can only be—the impeded respiration. This leads to imperfect use or disuse of the nasal channels, the structures adjacent have not the normal stimulus to grow excited by functional activity, and it is in the use or disuse of structures during growth and evolution that we shall find the master key to explain the normal or arrested evolution of the surrounding organs and structures. Hence child breathing is just as important as child feeding to bring about normal growth, and with insufficient supply of air through stenosed nostrils, or improperly prepared supply through the mouth come lessened vigour and weak breathing in addition to the developmental arrest.

It often happens that an operation for adenoids or nasal obstruction is regarded as the termination of the case and that it should be unnecessary to take any more special trouble. This idea should be most strongly combated. The operation is only the first step towards the child getting back into the right road. The track being clear it has now to be used and developed. Well-considered developmental and respiratory exercises for the expansion of the chest and the restoration of respiratory vigour, for the removal of articulation and resonance defects, hearing drill, correction of ocular defects, regulation of vaulted palate and crowded teeth, and numerous other defects may require careful attention if the child is to catch up his more fortunate companion who has not been hampered by years of obstruction. The operation removes the obstruction, but he has to overcome, often with difficulty, many of the results of the previous deficiency. In laying such stress on the influence of obstruction in producing hypertrophic or hyperplastic processes, it is not my wish even apparently to ignore other factors in the pathogeny of adenoids such as unresolved catarrhs, specific fevers, syphilis, struma, soil, climate, atmosphere, rickets, feeble breathing, and low vitality; but it is my deliberate opinion that if perfect nasal respiration be restored, in many cases, if the child is put under ordinary favourable hygienic conditions, almost miraculous improvement will follow; but all the care and attention directed against the other factors will prove unsatisfactory or fruitless if the nasal obstruction is ignored. Not that all cases of obstruction by any means require a formal operation if taken early. But it is far better to operate too early or for minimal obstruction than too late or not at all; but in order to prevent a long-standing obstruction during growth from imprinting itself indelibly upon the frame and features we must always have in view not only the removal of adenoids, but ensure the complete functional efficiency of the nasal channels as a whole.

In conclusion, I would remind you that prevention is better than cure, and that if in our field of work, as in others, we have knowledge of causative factors of disease, we can in many cases eliminate and prevent them. Just as in general medicine and surgery the highest achievement is the prevention of disease and deformity, so in our special areas of work we should aim at developing the prophylactic aspect of our subject and in diffusing the knowledge thereof broadcast. In this way, when a morbid process has been originated and detected, it can be corrected at an early stage. In this connexion I firmly believe that the greater recognition of the influence of nasal obstruction, in its earlier and slighter forms, in producing those catarrhal changes which extend to the ear, is destined to play a great part in the future in the prevention and arrest of deafness and other disorders in an early stage. As the constant dropping of water wears away the stone, though imperceptibly, so does the constant action of fall of air tension in a stenosed nostril make its result evident sooner or later. Physical laws are no more suspended in our field of work than in any other. It behoves us resolutely and firmly to apply scientific facts, and to concern ourselves no less with the beginnings of disease and its prevention than with the highest developments of special technique.

TROPICAL DISEASES.

WEDNESDAY, AUGUST 1ST.

Presidential Address.

Colonel KENNETH MACLEOD, I.M.S. (ret.), Professor of Clinical and Military Medicine at the Army Medical School, Netley, President of the section, gave an address defining the Scope and Aim of the Section's Work. He said: Since the last meeting of this section events have occurred which have emphasised the significance and enhanced the importance of its work. The war in South Africa has stimulated into vivid reality the unity and solidarity of the British Empire. The imperial idea implies not only a community of interests—social, commercial, and political—between the mother country and her colonies and dependencies, but also a community of suffering; and as tropical conditions and tropical diseases prevail in Greater Britain to such a large extent

the study of these, as they affect both the governing and the governed, has come to be recognised as a matter of vital and cardinal necessity. This has been fully acknowledged by the able Minister who presides over the colonies and who has realised more clearly than any of his predecessors the immense importance of inquiry and education as regards tropical pathology and hygiene. The Government of India has also awakened from its torpor and taken thought and action in the same direction by encouraging research, training men in bacteriological methods, establishing laboratories, appointing commissions, and promoting special investigations. A knowledge of the pathology and pathogenesis of disease must obviously precede and guide preventive and curative effort, and it cannot be too loudly proclaimed that this knowledge can only be obtained by systematic scientific research. The days of casual and statistical observations and dissertations have gone and it is now universally understood that nothing will avail for the solution of pathological problems except the undistracted work of trained agents provided with ample opportunities and appliances. The South African war has forced into prominent and painful attention two diseases which, although they cannot be called tropical diseases, manifest themselves with special severity as regards incidence and fatality under tropical conditions—namely, enteric fever and dysentery. That enteric fever existed in South Africa and was apt to prevail in South African towns and cantonments during the summer months was well known and its appearance among the troops engaged in this war was fully anticipated, but the excessive prevalence of the disease in a country and climate with a reputation for exceptional healthiness has come as an unpleasant surprise. No doubt the circumstances and exigencies of warfare are mainly responsible for the heavy tribute of sickness and death which enteric fever has levied. War shares with famine the malignant powers of enhancing the susceptibility to whatever infection happens to be present at the place and time. Enteric fever has been in grim evidence during recent wars on the Indian frontier and in the Egyptian Soudan; but malaria, cholera, yellow fever, and dysentery have on other occasions been stimulated into disastrous activity by war. So with famine: malarious disease, small-pox, diarrhœa, dysentery, and relapsing fever have attended or followed it, and at the present time cholera and plague are raging among the famine-stricken in India. The infection of enteric fever seems to be ubiquitous, portable, and peculiarly facile and subtle; and perhaps the most urgent question of the hour is how to mitigate its prevalence in the British army, in which in times of peace it causes one-third of the total mortality. It is important to note that a very marked contrast exists between the ordinary incidence and mortality of the disease in temperate and tropical or subtropical countries—in England and Canada on the one hand and in India and Egypt on the other. A similar contrast appears in the French army stationed in France and in Northern Africa. How much of this great excess is due to tropical conditions, topical and climatic, and how much to remediable sanitary defects, it is not easy to say, but side by side with the excessive suffering of the army in India we are confronted with the remarkable fact of the immunity of the native population. Whether a similar immunity exists among indigenous races and habitual residents in South Africa is an interesting question. Evidence seems to indicate that it is so. The native immunity in India, though not absolute, is undoubted; its cause has not been satisfactorily ascertained. It has been attributed to habituation to minute doses of the contagium, to protection conferred by attack during infancy and childhood, and to racial resistance acquired in the course of generations through both these influences. Some experiments by Freyer and others indicate that natives give positive reactions to Widal's test, but more extended and exact investigations on this point are desirable. It is quite certain that the immunity of natives is not due to superior sanitary conditions. Whether a similar immunity, temporary or permanent, can be engendered in European subjects by a process of inoculation such as has been devised by Professor Wright of Netley, and practised on a large scale among soldiers proceeding to the seat of war, is a question the reply to which is awaited with eager anxiety. Some figures obtained from Ladysmith have been published by Professor Wright which seem to show that some immunity is conferred by these inoculations, but though encouraging they are by no means demonstrative. Similar procedures for creating an immunity against cholera and plague initiated by Professor Haffkine have in India been attended with satisfactory results. But although a certain measure of preventive success has been obtained by these inoculations the employment of them appears at present to be practicable and useful only as an emergent expedient in the presence of a serious outbreak, and the prevention of cholera, plague, and enteric fever on a large scale must apparently be essayed on other lines and by other methods. Dysentery has been very rife in the South African army, but the disease has exhibited mostly a mild type and has been amenable to treatment. The persistence of plague in India and the appearance of the disease for the first time south of the equator—in Mauritius, South Africa, South America, and Australia—are events deserving of special notice. The disease has during its present prevalence confined itself mostly to warm and hot countries, and, though not exclusively a tropical disease, or apt in the tropics to be at its worst when conditions are most typically tropical, it appears to find in tropical countries and circumstances the most favouring environment. It is curious to remark that while in India natives appear to be readily susceptible to the infection of plague, Europeans, though not absolutely insusceptible, exhibit a comparative immunity—the reverse of what happens as regards enteric fever. This immunity is doubtless what I venture to call a sanitary immunity, due to a purer personal domestic and social life and perhaps to circumstances and habits rendering admission of infection less easy.

I trust that I have succeeded by these discursive observations in showing that recent events have expanded the scope and aim of our work in this section, and it seems to me fitting that we should at the commencement of our sectional labours remind ourselves of what these are. Our concern is not only with exclusively tropical diseases, many of them strangely named and imperfectly investigated and understood, which may be encountered and contracted in hot places where Europeans are compelled to reside for purposes of protection, administration, or commerce, and are not as a rule met with outside the tropics. More important are those diseases, originally or essentially tropical, which may be disseminated by intercourse with the tropics and may prevail for a time in extra-tropical localities in which they are not habitually present; and, finally, there are the diseases which are not specially tropical but which are liable to be aggravated in prevalence or severity by tropical conditions. These three classes represent a wide field of research, and, in addition, interesting questions arise as regards diseases which, common elsewhere, are rare or unknown in tropical countries. The field of study thus presented has its scientific and humanitarian aspects, and its cultivation has become an essential part of the business of imperial administration. It embraces not only acute infections and the sequelæ or constitutional incapacities resulting therefrom, but includes also those conditions affecting health and life which are vaguely designated as climatic, remediable only by adaptation, or which arise from sanitary defects or neglects capable of more easy amelioration. Hygienic improvements, personal, domestic, and social, have undoubtedly raised the standard of health and the value of life in the tropics, and residence and service in hot countries offer fewer and less formidable risks than they did in times past, but behind the question of individual impunity looms the question of colonisation or the continued vigour and vitality of the race when transplanted from temperate to torrid zones. The solution of these weighty problems constitutes the reason and purpose of our distinct sectional existence.

THE NAVY, ARMY, AND AMBULANCE.

WEDNESDAY, AUGUST 1ST.

Presidential Address.

Inspector-General BELGRAVE NINNIS, M.D., R.N., took as the subject of his Presidential Address the Treatment of Wounded at Sea. It appears to me, he said, a happy omen that the inauguration of the Navy, Army, and Ambulance Section should take place at a time like the present, when the great war—now we trust nearly at an end—has directed special attention to its three sub-divisions—namely, medicine and surgery, in relation to the services, and ambulance in connexion with both, and likewise with civil life, particularly in large towns. A goodly supply of papers on these and kindred subjects will claim your attention, but I notice with

regret the absence of one on a subject which I consider would be well worth the trouble of writing—namely, on the means at the disposal of the naval medical officer for the treatment of the injured on board a man-of-war, more especially during an action. Now, before I enter upon this subject, I should like to make a few remarks on the light in which the naval medical officer is regarded by his fellows in civil life. Experience of the medical press, extending over a somewhat lengthened period, has left the impression on my mind that there is a belief amongst our brethren in civil life that the naval medical officers, taken as a class, are either behind the times professionally or are credited (from lack of zeal) with neglecting to avail themselves of modern discoveries, both in medicine and surgery, and that this is due in great measure to absence for lengthened periods from the schools. If I have rightly interpreted the meaning conveyed in the medical press, I trust that you will believe me when I state that you do us an injustice. It is true that from the very nature of his calling the naval medical officer is away at times for a period of three or four years; but, on the other hand, it should be borne in mind that there are sick in other countries besides Great Britain; and studying familiar diseases under different climatic conditions, or cholera, yellow fever, plague, and other diseases in countries where they are endemic, with the methods of treatment adopted by those who have lived the whole of their professional life in their midst, and modifications in some ordinary operations and substitution of new ones amongst the profession abroad, is surely worth something. Operations at foreign hospitals can always be attended, and practitioners and hospital surgeons are, in my experience, ever willing to answer questions and to show you their cases where possible. I have not said anything about his own patients, which, if his ship is a large one, supply him with a heterogeneous practice in addition to a capital operation occasionally. From what I have said it should be seen that the naval medical officer need not of necessity get rusty. I have not mentioned that in addition he has the medical press, foreign as well as English, or that on his return home provision has been made for seniors and juniors alike to pass through a post-graduate course at the metropolitan hospitals of Great Britain and Ireland.

Now let us return to the question of the means at the disposal of the naval medical officer for the treatment of the injured on board a man-of-war, more especially during an action. To grasp the situation fully it must be borne in mind that the essentials of a fighting ship may be said to comprise the largest percentage of armament, offensive and defensive, combined with capability of rapid motion and a steady platform. So far as our present knowledge goes these conditions can only be obtained at the expense of space; or, in other words, the more effective a fighting machine the ship is the less space is available for quarters and accommodation for the sick. Necessary as light and fresh air are to all of us, in the case of the sick on board ship it will easily be understood that this necessity is more urgent. But light and fresh air can only be obtained in sufficient quantity above the water-line, and to place the sick-quarters above the water-line, amidst the hurly-burly of a sea fight, traversed by projectiles and wrecked by exploding shells, is of course out of the question, even supposing that sufficient space could be spared. The alternative is treating the sick and injured below—which means a limited amount of fresh air and that almost invariably supplied by mechanical means—artificial light, rapidly deteriorating atmosphere, and the by no means unlikely intrusion of a torpedo or of the ram of a neighbouring ship. It will doubtless be said that this condition exists only during war-time and that under ordinary circumstances plenty of space could be found on deck. Sufficient accommodation is, as a matter of fact, already set apart for the treatment of the sick, with ample light and fresh air, cots, and other fittings of recent and constantly improving designs, and in some cases electric light; but it must be remembered that for the reasons previously mentioned these peace arrangements must be vacated in war-time. As permanent quarters for the sick on board a fighting ship, situated in such a position as to be freely supplied with fresh air and light, are practically an impossibility, it follows that the fitting up of apparatus and the means of utilising modern inventions are likewise practically impossible, and therefore the naval medical officer cannot avail himself of their use.

In fact, the naval medical officer is not to be judged by the ordinary standard. He works under great disadvantages. Take an ordinary operation. A moving patient on a moving table, a moving operator standing on a floor changing its slope laterally and fore and aft, assistants automatically altering their positions in relation to the patient in retaining the upright position or their equilibrium; tracheotomy by the light of a candle or lamp, the patient being in a cot, or possibly in a hammock; hernia to be operated on, possibly during bad weather, for it is the nature of things that on board ship accidents should most frequently occur when there is most motion and the decks are wet and slippery; fractures to be retained in position under the same adverse circumstances. As for lack of zeal a collection of the novel splints and appliances to be found on board ships on return from out-of-the-way foreign stations would testify not only to the zeal of the naval medical officer, but also to his resourcefulness, for, be it remembered, he cannot send into the next street for a second opinion or to the instrument-maker for special appliances.

In bringing these remarks to an end I may add that it is, I believe, intended in the future to supplement fleets and squadrons in war-time with hospital cruisers, not merely transports for the injured but veritable floating hospitals with steam power and fittings and appliances up to date. During an action these ships would keep out of range but sufficiently close to collect the wounded when the fight was over, and sailing under the regulations of the Geneva Convention would be free from molestation or capture.

THE ANNUAL MUSEUM.

Little fault could be found in regard to the space placed this year at the disposal of the exhibitors. Indeed, there was space enough left for a smoking-lounge, and seating accommodation was also provided between the stalls. The Public Hall in Westgate-street proved to be well adapted for the display of foods and food products, drugs, mineral waters, &c., and those thousand-and-one accessories with which the exhibitor decorates his stall with consummate effect and in a manner calculated best to attract the visitor's attention. Surgical appliances, aseptic furniture, and miscellaneous articles of more or less interest to medical men were assigned a place in the old museum rooms a few doors away from the Public Hall, and here, again, the exhibitors contrived to decorate the rooms in an artistic and striking fashion. The section relating to foods and drugs was decidedly on a smaller scale than the same section in the annual museum at Portsmouth last year; but there was enough to keep the practitioner's interest maintained from start to finish. The trade aspect of this section is unavoidable, but the museum sub-committee are to be congratulated on having selected only those subjects for exhibition which are strictly of medical interest. We cannot help thinking, however, that a considerable improvement would be effected and a certain substantial attraction added if a few demonstrations of a strictly scientific character could be held at the same time and in the same place. It is decidedly irksome to be constantly urged on all sides to consider new formulæ, to handle new contrivances, or to taste new food products. The round of inspection again would be much more comfortable to the visitor if the exhibitors were less pressing in urging the claims and merits of the various exhibits which sometimes is done in such a way as to come very close to the method of the tout. There is always a great deal to interest the medical man on the stalls of this annual exhibition, and he can soon become acquainted with the important advances in the preparation and style of drugs, in the elaboration of special foods, &c., without much assistance from the exhibitor, who is tempted too often to volunteer voluble information of a quite superfluous kind.

As on previous occasions we shall adopt the following classification of the exhibits, emphasising as far as possible those subjects of special novelty or which possess a special interest:—I., Drugs; II., Foods and Food Products; III., Sanitary Appliances, Disinfectants, &c.; IV., Surgical Instruments and Appliances; V., Mineral Waters, Beverages, &c.; VI., Publications; and VII., Miscellaneous.

I.—DRUGS.

In taking a general view of this important section of the museum two facts were noticeable—(1) that the tide of synthetics is steadily abating, and (2) that apparently little further departure has been made in regard to new administrative forms of medicaments. Certain organo-metallic preparations seem now to occupy the

position of novelty which some years ago was held by the coal-tar synthetics. It is easy enough for the organic chemist to elaborate new organic compounds, so abundant and suggestive are the materials at his beck and call; but some check, perhaps, has been placed on the successive production of these compounds by the action of the profession. Whilst recognising the value of many synthetics physicians have not failed to discountenance the indiscriminate placing upon the market of scores of complicated organic preparations the very multiplicity of which operates against determining their pharmacological value with that exactness which in the true interest of therapeutics is desirable. Some interesting derivatives of certain alkaloids were shown by exhibitors here and there, which are claimed to possess decided advantages over the original alkaloid. As examples we may quote the ethyl carbonate of quinine known as euquinine, and heroin the diacetic derivative of morphine. Again, there were some excellent illustrations of improvements in the pharmaceutical preparation of extracts and in the isolation from their respective plants of more or less definite and therapeutically active bodies which may be called "resinoids." A considerable amount of research has been undertaken in this direction in the "Merrell" laboratories of the Wm. S. Merrell Chemical Company, Cincinnati, Ohio (47, Wilson-street, Finsbury-square, London, E.C.), with encouraging results. Attention has been chiefly directed to retaining the active properties of the drugs and eliminating the inert or often injurious principles. Amongst these preparations we may mention podophyllin resin and the resin of rattle root or black cohosh known as macrotin and a much more efficient preparation than cimicifugin. The same firm showed some excellent hydrastia preparations and some pure specimens of salicylic acid crystals made from oil of winter-green. The crystals thus prepared are perfectly definite and well formed, a fact which in a measure testifies to the purity of the acid. An interesting derivative of oil of winter-green occurs in the form of "iodozen"—a true iodine compound of the oil of winter-green which possesses powerful antiseptic properties, rendering it an agreeable and effective substitute for iodoform. A very interesting collection of pharmaceutical chemicals was presented to view on the stall of Mr. E. Merck of Darmstadt (16, Jewry-street, London, E.C.). This firm has recently come prominently forward in the manufacture of perfectly pure preparations, including the alkaloids and the salts of organic acids, and the active principles of plant extracts and certain other rare principles. Perhaps the best examples of the interesting series of organo-metallic preparations which have been recently introduced into medicine occurred amongst the exhibits of Messrs. Burgoyne, Burbidges, and Company of 12 and 16, Coleman-street, London, E.C. We have already dealt with them in our analytical columns. Collargolum, for example, is described as a water-soluble metallic silver, and hyrgolum as water-soluble metallic hydrargyrum, both of which are more effective than the better-known salts of these respective metals. The exhibit also included citrate of silver, which is said to have been used with marked success in the treatment of wounds, and likewise lactate of silver. Messrs. C. J. Hewlett and Son, of 35 to 42, Charlotte-street, London, E.C., had a very well-arranged and attractive display of their special preparations. Worthy of mention as comparative novelties are bromipin, described as an organic compound of oil of sesame, and containing 10 per cent. of bromine, though there is no evidence of the presence of this element according to taste and smell. It appears to afford a means of administering bromine without giving rise to unpleasant effects. Naftalan has already been described in our analytical columns, but we may repeat that it is a product of the fractional distillation of Armenian naphtha and has been used as an analgesic and parasiticide. Cases are recorded of eczema and other skin diseases which have been benefited by the application of this interesting substance. Attention has recently been drawn to monsonia, the drug derived from *Monsonia ovata*, as a remedy for dysentery, and the seeds of the *Plantago isphagul* have been used for the same purpose. Preparations of these vegetable products are made by this firm. Their exhibit included also many excellent antiseptic preparations and a useful series of test-cabinets for clinical use. The introduction of "cacodyls" into medicine marks an interesting and important departure in the safe and effective administration of arsenic. Sodium cacodylate appears to be the best form for the purpose. It has been administered continuously in large doses in the treatment of phthisis and in diabetes. It favourably influences the processes of nutrition. Messrs. Gilbert, Kimpton, and Company of 19, St. Dunstan's-hill, London, E.C., showed examples both of the acid and of the sodium salt. Glass bulbs are made containing five-sixths of a grain and the so-called "arsycodile" pills 0·025 milligramme of sodium cacodylate. An iron cacodylate is also prepared especially for the treatment of chlorosis and anæmia. This interesting non-toxic organic salt of arsenic serves as a remarkable example of the therapeutic difference determined by molecular structure. The same acid and its sodium salt were exhibited on the well-stocked and attractive stall of Mr. W. Martindale of 10, New Cavendish-street, London, W. An interesting series of glass capsules was a feature of this exhibit, containing respectively amyl-nitrite, carbonised amyl-nitrite, chloroform, ethyl bromide and iodide, and isobutyl nitrite. Again should be mentioned the conveniently designed test-cases for clinical work. These included the portable urine test-case and a case containing bacteriological reagents necessary for the detection of tubercle bacilli, diphtheria bacilli, typhoid bacilli, and other micro-organisms. An interesting novelty on the stall of Messrs. Oppenheimer, Son, and Company, Limited, of 179, Queen Victoria-street, London, E.C., consisted of "cerettes." These are flexible tubes containing ointments and medicated soaps, each cerette holding sufficient for one application. The contents may be easily expressed from a cerette after the manner of a collapsible metal tube. While the cerette provides against the deterioration of its contents through contact with air, it avoids the possibility of metallic impurity. Ointments and soaps may thus be preserved unchanged and, moreover, are clean for the purpose of application. The exhibit included also some interesting applications of the palatinoids. Amongst these may be mentioned, as instances of the particular advantage of this administrative form of drug, palatinoids containing animal substances, palatinoids of liquids and of tinctures. Foremost amongst the pharmaceutical products shown on the stall of Messrs. Zimmer and Company, Frankfort-on-Maine, was a splendid specimen, in needle-shaped crystals, of euquinine. This is ethyl carbonate of quinine, behaving chemically as quinine, and pharmacologically also, with the advantage, it is stated, of being free from so many of the objectionable effects of quinine. Side by side with this interesting quinine substitute was eunatrol, a chemically pure oleate of sodium contained in chocolate-coated pills. This substance has been used with advantage in hepatic disorder and is said to stimulate the flow of bile and to assist the elimination of gall-stones. Another interesting compound shown by this firm was urosine, a quinate of lithia which is said to have a solvent effect upon uric acid concretions. It is used also favourably in gout. Validol (by the same firm) is a liquid compound of menthol and valerianic acid in which the objectionable properties of each constituent disappear. It has been employed as a restorative, stomachic, and anti-neuralgic, and has been prescribed also in hysteria with advantage. The Bayer Company, Limited, of 19, St. Dunstan's-hill, London, and Ebberfeld, have been very active during recent years in introducing new organic salts, and on the present occasion an excellent collection of skilfully prepared specimens were presented to view, which included trional, a hypnotic of some value, tannigen and tannopine, both intestinal astringents, salophen, valuable in the pyrexia of influenza, aspirin, the acetic ester of salicylic acid, giving all the therapeutic advantages of the acid without the disadvantages, heroin, the diacetic ester of morphia and its soluble salt, the hydrochloride, substituted with advantage for morphia. Lastly the interesting compound of protein with silver known as protargol is worthy of mention as an excellent substitute for nitrate of silver in diseases of the eye and for application as an antiseptic in gonorrhœa. It is easily soluble in water. Messrs. Parke, Davis, and Company of 111, Queen Victoria-street, London, E.C., exhibited such a complete series of their special preparations as to necessitate the occupation of two stalls. Amongst the drugs introduced comparatively recently should be mentioned chloretone, a hypnotic, antiseptic, and local anæsthetic which we have already described in our analytical columns. The exhibit included also standard serums, animal extracts, and a variety of drugs standardised by physiological tests upon animals and others standardised by chemical assay. "Kelpion" is the name of new stainless, non-irritant iodine ointment; the oil basis

is emollient and rapidly absorbs carrying with it the iodine. A few minutes after application the presence of iodine may be easily recognised in the saliva. It provides an excellent means of applying iodine in its well-known forms without producing objectionable effects. The preparation is exhibited by the Kelpion Company of Norgrove-buildings, 59A, Bishopsgate-street, London, E.C. Specimens of the pure oil of mustard were shown by Messrs. J. and J. Colman, Limited, of Norwich and 108, Cannon-street, London, E.C. The oil is well known as an application in the relief of rheumatic affections. Specially prepared sinapisms were also submitted to inspection, as was also a special mustard bran for use in poultices. A very tastefully displayed stall was that of Messrs. Wyleys, Limited, of Coventry. It contained a number of excellent administrative forms, powders, pellets, capsules, and cachets, whilst special drugs were contained in gelatin-coated pills which were oval in shape. This firm is evidently alive to the requirements of modern medicine. Kutnow's Improved Effervescent Carlsbad Powder has been approved by experience as one of the best preparations for the treatment of chronic constipation. It is identical in composition with the salts of the Carlsbad spring. It keeps well on account of having been carefully desiccated. The exhibit included an anti-asthmatic powder and cigarettes, the fumes from which are said to give relief and to have no objectionable action upon the heart, as is sometimes the case with lobelia and datura tatula.

Medical News.

VICTORIA UNIVERSITY.—At examinations held in July the following candidates were successful in the subjects indicated:—

SECOND EXAMINATION.

A. Anatomy and Physiology.—P. W. Ashmore, Yorkshire; C. H. Bromhall, Owens; Stanley Brown, University; Thomas Brown, Yorkshire; W. J. Cox, University College, Sheffield; J. A. Davenport, Owens; R. T. Dobson, University; W. P. Grant, Owens; H. S. Harling, Yorkshire; Rowland Heathcote, E. W. Henstock, Benjamin Herald, and G. R. Hitchin, Owens; E. F. Hoare, University; C. H. Hopwood and G. H. Leigh, Owens; Hugh McManus and William Rotheram, University; J. A. C. Roy, S. H. Evan, W. F. Shaw, and J. M. Skinner, Owens; J. N. M. Sykes, I. C. Thorburn, and G. F. C. Walker, University; and M. S. Wood, Owens.

B. Materia Medica and Pharmacy.—R. A. H. Atkinson, J. B. Barnes, John Battersby, and A. N. Benson, Owens; J. P. Bligh, University; Alexander Boothroyd, Owens; Alan Boyle and W. E. Brierley, Yorkshire; Howard Buck and Laurence Clay, Owens; Richard Coates, Yorkshire; Reginald Collier and Thomas Coogan, Owens; Edward Cundall, Yorkshire; J. L. Falconer and J. P. Garlick, Owens; Ernest Gibson, University; Tom Glover, J. W. Hartley, and H. D. Haworth, Owens; S. L. Heald, Yorkshire; J. P. Henderson and Arthur Hendry, University; Benjamin Herald, Owens; W. E. Hewitt, University; Hubert Hodge and F. C. Hudson, Owens; C. A. Hughes, University; A. D. Hunt, Yorkshire; H. R. Hurter, University; Hamilton Irving, J. M. A. Jones, and W. H. Judson, Owens; E. W. Kemp, Yorkshire; George Laurence and J. T. Lloyd, University; T. W. Lonsdale, Owens; J. F. McCann, University; J. de V. Mather, Stuart Murray, R. T. A. Patchett, F. G. Pell-Ilderton, and Frank Robinson, Owens; William Rotheram, University; W. E. Rothwell, Owens; F. H. Salisbury, University; J. L. Schilling and W. G. Scott, Yorkshire; Harold Simms, J. M. Skinner, R. T. Slinger, and J. C. Smyth, Owens; J. W. Sowerbutts and Bertram Sluggitt, Yorkshire; R. H. Swindells, A. F. Thompson, A. M. Walker, Douglas Wardleworth, and E. M. Wilkins, Owens; Henry Woods, University; and A. R. Wright and William Wright, Owens.

FINAL EXAMINATION.

Part I.—E. M. Ashcroft, and F. H. S. Ashworth, Owens: Herbert Bates, University; S. W. Battle, Yorkshire; S. B. Brentnall, Owens; Henry Brown, Yorkshire; C. W. Budden, University; J. B. Cook, J. F. Corson, J. M. Cort, Alexander Cran, and E. N. Cunliffe, Owens; S. W. Davies, University; Tom Eastham, F. S. Fletcher, and Mercier Gamble, Owens; G. W. Gelderd, and V. J. Glover, University; P. H. Green, and J. W. Greenwood, Owens; Frederick Griffith, University; F. W. Harrowell, Yorkshire; A. G. Jackson, and R. E. Kelly, University; C. P. Lapage, H. F. Lee, and Charles Mackey, Owens; J. C. Mann, University; S. B. Mehta, Owens; J. S. W. Nuttall, and T. F. Pugh, University; P. A. H. Radcliffe, Yorkshire; H. H. Rayner, F. M. Rogers, F. R. Sawdon, and G. H. Shaw, Owens; Robert Smailes, Yorkshire; H. G. Tansley, Owens; A. R. Thompson, Yorkshire; George Unsworth, and H. C. Waterhouse, Owens; S. C. Wilkinson, Yorkshire; R. D. Willcocks, University; and B. M. Wilson, and J. G. Woolnam, Owens.

Part II.—Arthur Anderson, Owens; E. W. Anderton, Yorkshire; D. A. Ashton, Owens; Philip Benington and J. H. Billing, University; A. G. S. Broughton, Yorkshire; J. P. Brown, Owens; Robert Burnet, University; A. H. Capamagian, Daniel Cowin, and C. W. Crawshaw, Owens; J. L. Dimond,† University; F. H. Flack and C. R. Hall,* Owens; A. E. Horsfall, Yorkshire; E. C. Hulme, Owens; A. R. Jacksont and L. C. Johnson, University; Reginald Lawrence and C. H. Lee, Owens; S. F. Linton, University; B. C. Middleton and R. S. Nichol, Owens; A. S. Parkin, son, Yorkshire; William Rigby, H. W. Russell, C. R. Schofield Herbert Terry, and A. G. Wilkins,† Owens; C. R. Willans, Yorkshire; and P. G. Williamson and W. A. B. Young, Owens.

* Awarded first-class honours. † Awarded second-class honours.

Diploma in Public Health.—J. J. Butterworth, M.B., Ch.B; F. J. H. Coutts, M.D.; A. S. Grünbaum; C. A. Hill; and W. F. Moore.

Sanitary Inspection Certificates.—W. Butler, Manchester Technical School; J. J. L. Clark, University; and A. Herringshaw, F. Wilkinson, and R. W. Willan, Manchester Technical School.

UNIVERSITY OF EDINBURGH.—On July 28th the following degrees were conferred:—

Degree of Doctor of Medicine.—Charles Crawford Aitken, Scotland, M.B., C.M.; Charles James Hill Aitken, Scotland, M.B., C.M.; ‡Hugh Llewellyn Apthorp, England, M.B., C.M.; ‡James Andrew Blair, Scotland, D.Sc., M.B., C.M.; ‡John Macdonald Brown, Scotland, M.B., C.M.; Alexander Brownlie, Scotland, M.B., C.M.; *Walter William Chipman, Canada, B.A., M.B., C.M. (*in absentiâ*); Frank‡ Herbert Aylen Clayton, England, M.B., C.M.; Frederick William Collinson, England, M.B., C.M.; ‡Horace Cranxanthorp Colman, England, M.B., C.M.; William Craig, Scotland, M.B., C.M.; ‡Herbert William Crosse, England, M.B., C.M.; Arthur Dickson, Scotland, M.B., C.M.; †Charles Cromhall Easterbrook, England, M.A., M.B., C.M.; ‡Alexander Edington, Scotland, M.B., C.M. (*in absentiâ*); William Ernest Lloyd Elliott, Wales, M.B., C.M.; *David James Galloway, Scotland, M.B., C.M. (*in absentiâ*); William Alexander Gibb, Scotland, M.B., C.M.; Wilfred Ernest Gibbons, England, M.B., C.M.; ‡James Andrew Gibson, Scotland, M.B., C.M.; †Robert M'Lean Gibson, Scotland, M.B., C.M. (*in absentiâ*); Robert Wilson Gibson, England, M.B., C.M.; Thomas Gibson, Scotland, M.B., C.M.; ‡Harry Grey, Scotland, M.B., C.M.; George Pouncey Henderson, England, M.B., C.M.; †Thomas Alfred Hird, England, M.B., C.M.; Guy Bertram Hollings, England, M.B., Ch.B.; Edward Siddall Jackson, England, M.B., C.M.; Arthur Septimus Lawrence, South Africa, M.B., C.M. (*in absentiâ*); ‡William Duncan Lawrie England, M.B., C.M.; Henry James Ley, England, M.B., C.M.; ‡Peter Burden M'Nicol, Scotland, M.B., C.M.; ‡James Sackville Martin, Ireland, M.B., C.M.; George Victor Miller, England, M.B., C.M.; Ahmed Mirza, India, B.Sc., M.B., C.M. (*in absentiâ*); ‡Owen St. John Moses, Armenia, M.B., C.M.; ‡Bernard Ehrenfried Myers, New Zealand, M.B., C.M.; ‡James Nicoll, Scotland, M.B., C.M.; Harold Nuttall, England, M.A., M.B., C.M.; Ernest Stanley Nutting, England, M.B., C.M.; ‡Edward Lloyd Owen, Wales, M.B., C.M.; George Peterkin, England, M.B., C.M.; ‡James Coubro Potter, England, M.B., C.M.; Frank Grégoire Proudfoot, Scotland, M.A., M.B., C.M.; †Francis White Hope Robson, England, M.B., C.M.; David Richard Rowlands, Wales, M.B., C.M.; Gerald Alick Southwell Sander, France, M.B., C.M.; ‡James Duncan Slight, Scotland, M.A., M.B., Ch.B.; Alexander Campbell Smith, Scotland, M.B., C.M.; ‡John Nigel Stark, Scotland, M.B., C.M.; John Edward Thomas, Wales, M.B., C.M.; †Peter George Leeb-du Toit, South Africa, M.B., Ch.B.; and *David Waterson, Scotland, M.A., M.B., C.M.

* Awarded gold medal for thesis. † Highly commended for thesis.
‡ Commended for thesis.

Degrees of Bachelor in Medicine and Master in Surgery.—Maung Ba-Ket, Burma; John Brodie Boyd, Scotland; Oswald Arnold Gee, England; John Thomas Hurst, England; John Malcolm Jeffrey, Scotland; Robert Alexander MacKenzie Macleod, Scotland; §John Charles Mitchell, D.Sc., Scotland; Archibald Duncan Nimmo, Scotland; Robert Owen, Wales; and Miles Charles Carreston Seton, Scotland.

§ Passed with second-class honours.

Degrees of Bachelor of Medicine and Bachelor of Surgery.—Robert Cunningham Affleck, Scotland; Henry Alexander, Ireland; Thomas Hood Wilson Alexander, Scotland; Eliza Matthew Anderson, Scotland; Mary Scott Anderson, Scotland; Henry Ernest Arbuckle, Natal; Robert Andrew Jacomb Asbury, England; Bernard Hugh Stanley Aylward, England; Albert Augustus Ayton, Jamaica; Alexander James Baird, M.A., Scotland; Harvey Baird, Scotland; Simon Alexander Ballantyne, Scotland; Leonard Dieckmann Hamilton Baugh, Jamaica; John Henderson Bell, Scotland; Joseph Mitchell Benson, England; Hubert Bishop, Trinidad; *Arthur Branfoot Black, Scotland; John Southey Bostock, England; *Orlando Charnock Bradley, England; Laurence Percival Brassey, England; James M'Culloch Leigh Brown, M.A., Scotland; Launcelot Bruce, Scotland; Adam Brydon, Scotland; George Farnie Buist, Scotland; George Berkeley Butt, Ireland; John Profeit Campbell, Scotland; Malcolm Campbell, M.A., Scotland; Samuel Marcus Dill Campbell, Ireland; George Scott Carmichael, Scotland; Violet Alice Penrose Coghill, Ireland; John Craig, Scotland; Leonard Crossley, England; Horatius Bonar Dodds, Scotland; John Primrose Douglas, Scotland; Cyril Hartley Durrant, West Indies; William Eadie, England; Robert Sidney Ellis, Scotland; Cecil Henry Elmes, Ireland; Johannes Stefanus Enslin, South Africa; David Robert Evans, Wales; *Edward Ewart, Scotland; Drummond James Fergusson, England; Andrew Fleming, Scotland; Bernard Gilpin Forman, Scotland; Catherine Fraser, Scotland; Charles Fraser, M.A., Scotland; Alexander Frew, Scotland; William Ernest Frost, Ireland; Yoshinobu Fukuda, Japan; James Stewart Geikie, Scotland; William Girdwood, South Africa; Arthur Evelyn Goldie, Jamaica; George Watson Guthrie, Scotland; ‖George Henry Hanna, Jamaica; Frederick Hardie, Scotland; Norman Ernest Jasper Harding, England; Herbert Harris, England; Thomson Henderson, Scotland; Davis Heron, Ireland; Eleanor Hodson, England; Katie Welton Hogg, B.A., Australia; Henry John Hoile, M.A., Scotland; Lionel John Hood, Australia; William Hutchison, England; Francis Field Cunningham Jagger, England; Edward Bald Jamieson, Scotland; * James George Silver Jamieson, M.A., Scotland; James Crawford Kennedy, Scotland; Francis Kenneth Kerr, Scotland; Herbert Christian Keun, Straits Settlements; Servase Meyer de Kock, South Africa; George Ross Laing, Scotland; *Langworthy Laurie, England; Robert Gerald Leach, England;

Charles George Stretton Leeds, England; George Herbert Lewis, Wales; Robert John M'Clelland, Ireland; Christopher Birdwood M'Conaghy, Ireland; ¶ John Gordon M'Dougall, Scotland; Sara Lyle M'Elderry, Ireland; Elizabeth M'Elney, Ireland; Alexander Campbell Nicholson M'Hattie, Scotland; James Herbert M'Kee, Ireland; Alexander John MacKenzie, Scotland; Dundas Simpson MacKnight, Scotland; Robert Clephane Maclachlan, New Zealand; Harriet Joanna Campbell Maclaren, M.A., Scotland; Henry John M'Lean, New Zealand; Duncan Mackay MacLeod, Scotland; John M'Callum Anderson Macmillan, M.A., Scotland; Elizabeth Macrory, Ireland; ¶ Arthur Anderson Martin, New Zealand; Harry Mason, England; Frederick Crichton Matthew, M.A., Scotland; Mary Jenny Menzies, England; Hugh Crichton Miller, M.A., Scotland; John Brownlee Milne, Scotland; Robert Macfarlane Mitchell, Scotland; Janet Ainslie Shiells Mouat, Scotland; James Munro, Scotland; Florizel de Lorme Myers, Jamaica; Horace Clulow Nixon, England; Caroline Elizabeth O'Connor, Ireland; James Cuthbertson Parker, Scotland; Norman Patterson, Scotland; Cuthbert Balfour Paul, Scotland; ‖ John Pender, Scotland; Mary Churchill Pepper, England; John Boyd Primmer, Scotland; John Rowlands Prytherch, Wales; Samuel Rattray, Scotland; Percy Chambers Rayner, England; John Lawrence Rentoul, Ireland; Owen Lewellin Rhys, Wales; Catherine Mary Richardson, England; Lionel Charles Peel Ritchie, Scotland; Thomas Robert Robertson, Scotland; William Rogers, Wales (*in absentiâ*); ‖ Robert Ainslie Ross, South Africa; William Charles Ross, Scotland; Arthur John Ryle, Wales; Laura Stewart Sandeman, Scotland; Richard Akiwande Savage, West Africa; Thomas Boyle Hill Scott, Ireland; William Sibbald Scott, Scotland; Alexander Kenneth Smith Shand, Scotland; Hubert Dunbar Shepherd, England; ¶ Thomas Scott Shepherd, England; Samuel Ramsay Sibbald, Scotland; Frederic David Simpson, Scotland; William Sloss, Australia; Harry Oswald Smith, Scotland; Charles Buchanan Snow, B.A., B.Sc., New Zealand; Charles Edward Southon, India; Hugh Meredith Speirs, England; Arthur Dunbar Spence, Scotland; Eleanor Rosina Sproull, Ireland; Thomas Grainger Stewart, Scotland; Clement Percival Strong, India; Frederic Troughton Thompson, Scotland; John Thornhill, Ireland; John Hardwick Thornley, England; ¶ Alexander Trotter, Scotland; George Reynolds Turner, England; Karl Hermann Heinrich Uffmann, India; ¶ William Wallace, England; Andrew Gordon Watson, Scotland; Allan Stewart Watson, England; Norman Septimus Wells, Burma; George Duncan Whyte, England; Frank Morewood Wigg, Australia; Alexander Jeans Williamson, Scotland; Tasman John George Wilson, Tasmania; Albert Edward Bathurst Wood, England; ‖ Arthur Murray Wood, Scotland; ¶ Garnett Wright, England; John Harold Wrightson, England; and Johannes Cornelius Zuidmeer, Cape Colony.

‖ Passed with first-class honours. ¶ Passed with second-class honours.

The following scholarships, prizes, &c., have been awarded:—

Ettles Scholarship, Robert Ainslie Ross, M.B., Ch.B.; Beaney Prize in Anatomy and Surgery, George Scott Carmichael, M.B., Ch.B.; Freeland-Barbour Fellowship in Anatomy, Physiology, and Pathology, John Pender, M.B., Ch.B.; Allan Fellowship in Clinical Medicine and Clinical Surgery, George Scott Carmichael, M.B., Ch.B.; Mouat Scholarship in Practice of Physic, Edward Ewart, M.B., Ch.B.; Stark Scholarship in Clinical Medicine, George Lyon, M.B., Ch.B.; Gunning Victoria Jubilee Prize in Materia Medica, Ernest Francis Bashford, M.B., Ch.B.; Gunning Victoria Jubilee Prize in Obstetrics, Alfred Charles Sandstein, M.B., Ch.B.; Buchanan Scholarship in Gynæcology, Frederic David Simpson, M.B., Ch.B.; James Scott Scholarship in Midwifery, William Ernest Frost, M.B., Ch.B.; M'Cosh Graduates and Medical Bursaries, John Charles Mitchell, D.Sc., M.B., C.M.; and the Anderson Henry Prize in Botany, Cameron Robertson Gibson. The Cameron Prize in Therapeutics has been awarded to W. M. Haffkine, C.I.E., for his work in preventive inoculation for plague.

FOREIGN UNIVERSITY INTELLIGENCE.—*Breslau:* Dr. R. Stern has been promoted to an Extraordinary Professorship of Internal Medicine. Dr. Paul Jensen has been recognised as *privat-docent* of Physiology.—*Chicago (Rush Medical College):* Dr. J. Loeb has been appointed Professor of Physiology in succession to Dr. Dodson.—*Freiburg (Baden):* Dr. Nagel, assistant to Professor Kries, has been recognised as *privat-docent* of Physiology.—*Greifswald:* Dr. Philipp Jung has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Heidelberg:* Dr. C. Jung, Professor of Odontology, has resigned. Dr. Karl Gegenbaur, Professor of Anatomy, is retiring.—*Kiel:* Dr. Hans Hensen has been recognised as *privat-docent* of Internal Medicine.—*Leipsic:* Dr. Sandor Kaestner, *privat-docent* of Anatomy, has been promoted to an Extraordinary Professorship.—*Munich:* Dr. Oscar Eversbusch of Erlangen has been offered the Professorship of Ophthalmology as successor to Dr. von Rothmund, who is retiring.—*Philadelphia (Polyclinic):* Dr. James Thorington has been appointed Professor of Ophthalmology.—*New York (Post-Graduate School):* Dr. Charles W. Allen has been appointed Assistant Professor of Dermatology.—*Strasburg:* Dr. Martin Benno, *privat-docent* of Pathology and Pathological Anatomy, and Dr. Dietrich Gerhardt—son of the well-known Professor Gerhardt—*privat-docent* of Internal Medicine, have been appointed Extraordinary Professors.—*Tubingen:* Dr. Ernst Schwalbe of Berlin has been recognised as *privat-docent* of Physiology. Dr. Sarwey, Assistant Physician in the Female Clinic has been accorded the rank and title of Extraordinary Professor.—*Würzburg:* Dr. Ludwig Medicus has been appointed to the Chair of Pharmacy and Pharmaceutical Chemistry.

SOUTH WALES AND MONMOUTHSHIRE SANITARY INSPECTORS' ASSOCIATION.—A meeting of this association was held at Cardiff on July 26th, under the presidency of Dr. W. Williams. Dr. Walford read an interesting paper upon the Work of Port Sanitary Authorities.

SUPERANNUATION ALLOWANCE.—On the resignation of Mr. George Rigden, M.R.C.S. Eng., after 63 years' service as surgeon to the Canterbury Dispensary, he has been granted by the committee an annuity of £200 per annum.

MEDICAL MAGISTRATES.—Mr. H. G. Button, M.R.C.S. Eng., of Junee, Mr. A. E. Cox, M.B. Edin., of Forbes, Mr. W. J. Munro, M.B., Ch.M. Edin., M.R.C.S. Eng., of Glebe, and Mr. H. Chesson, L.R.C.P. Lond., M.R.C.S. Eng., of Pittsworth, have been appointed Justices of the Peace for New South Wales or Queensland as the case may be.

PRESENTATIONS TO A MEDICAL MAN.—Mr. Frank A. Arnold, M.B. Lond., late resident surgeon of the Memorial Hospital, Buluwayo, on the occasion of his leaving the hospital, was presented by the nurses with a clock as a token of their high esteem and respect.—Dr. Arnold was also the recipient of a travelling toilet case from the orderlies of the hospital.

THE HOSPITALS OF ONTARIO.—The thirtieth annual report of the hospitals of the province of Ontario shows that there are now in operation in this province of 2,000,000 people 50 hospitals directly receiving Governmental aid annually from the revenues of the province. The number of sick treated in these various institutions during the past hospital year numbered 26,825, exclusive of the thousands known as outdoor patients who receive advice and medicine from time to time. The total expenditure for the year has approached 500,000 dols. Of this amount the Government contributes a little over one-quarter. In addition to this there are some 40 houses of refuge in the province, 31 orphan asylums, 4 homes for incurables, 3 convalescent homes, 18 county homes for the poor, and 2 Magdalen hospitals, having an aggregate of 10,000 inmates. A glance over the report shows the number of certain diseases treated in these hospitals; for instance, there were 527 cases of appendicitis, 321 being male and 206 female; hysteria, 47 males and 224 females; locomotor ataxia, 28 males and 3 females; glaucoma, 17 males and 17 females; gall-stones, 41 males and 43 females; diabetes mellitus, 42 males and 14 females; epithelial cancer, 112 males and 83 females; goitre, 7 males and 36 females. The Toronto General Hospital admitted 2986 patients during the year; 3388 were treated during the year, of whom 206 died. The revenue of this hospital was $76,633.13 and the expenditure $79,911.61.

METROPOLITAN HOSPITAL SUNDAY FUND.—A meeting of the Council of this Fund was held at the Mansion House on Monday, July 30th, Sir Sydney Waterlow being in the chair. The report of the committee of distribution for 1900, which stated that this year 199 institutions had made applications for grants from the funds at the Council's disposal and that the distribution of £46,492 to 140 hospitals, &c., and to 54 dispensaries was recommended, was adopted. For the second time Mr. George Herring has given £10,000 to the Fund. Sir Savile Crossley has made a donation of £500. The only matter of unusual interest upon which discussion took place was a reference to the state of affairs at the National Hospital for the Paralysed and Epileptic, Queen-square, a matter which we deal with elsewhere. Extraordinary pressure on our columns prevents us from detailing the awards this week.—The following were among the principal amounts received on July 31st at the Mansion House in aid of the Metropolitan Hospital Sunday Fund: Sir Savile Crossley, Bart., a further £500 (tenth donation); Westminster Abbey, £161; St. Stephen, Westbourne-park, £138; Willesden Presbyterian Church, £48; St. Matthew, Forest-gate, £20; Wanstead Friends' Meeting, £38; Catholic Apostolic Church, Chelsea, £40; St. Margaret's, Lee, and Boone's Chapel, £51; St. Margaret, Barking, £38; Barnes Parish Church, £25; All Saints', St. John's Wood, £40; St. Barnabas, Clapham-common, £32; Camden-road Baptist Chapel, £20; St. John's, Lensford, £22; St. Matthew, Ealing, £33. The total now

exceeds £49,500. This year's awards will probably be paid on or about August 10th.

THE LATE MR. W. L. HUGHES.—Mr. William Lewis Hughes died at his residence, Carmarthen, on July 17th, in his forty-eighth year. Mr. Hughes was the son of the late Mr. Hughes of Trebersed. He was educated at Llandovery Grammar School and received his medical education at the London Hospital Medical School, qualifying as M.R.C.S. Eng. and L.S.A. in 1875 and 1874 respectively. After filling resident hospital appointments in London he commenced practice in Carmarthen and held for several years the appointments of surgeon to the Carmarthen Infirmary and to Carmarthen Prison; he was also district medical officer to the Carmarthen Union and surgeon to the 1st Volunteer Battalion the Welsh Regiment. At the time of his death Mr. Hughes was consulting surgeon to the Carmarthen Infirmary and medical officer of health of the town. Mr. Hughes, who was very popular in Carmarthen, will be much missed there, and by his early death a familiar figure in the district has been removed.

Parliamentary Intelligence.

HOUSE OF COMMONS.

THURSDAY, JULY 26TH.

Arsenic Poisoning.

MR. TENNANT asked the Home Secretary whether an inquiry was held in 1899 into the nature of employment in the extraction of arsenic; whether he had received a report upon the subject and, if so, whether it would be laid upon the table of the House; and whether it was proposed to amend the existing special rules relating to this employment.—Sir MATTHEW WHITE RIDLEY replied: I instituted an inquiry last year with regard to the health of the persons employed in certain works for the reduction of arsenic in Devon and Cornwall. I have not yet received the final report on this inquiry, but I gather from an interim report made some time ago that it is not likely that the establishment of any new special rules in these works will be necessary.

The Local Government Board Vaccine Lymph.

Mr. THOMAS BAYLEY asked the President of the Local Government Board (1) whether he had received information of the bacterial impurity of the vaccine lymph now or recently supplied for vaccination; (2) whether he was aware that certain brands of lymph, including that supplied by the Local Government Board, had developed colonies of germs, rendering their use improper for vaccination; and (3) whether he would prohibit the use of such lymphs in vaccination until freedom from contamination by them might be ensured.—Mr. CHAPLIN: In reply to the first paragraph, I have received no information as to the bacterial impurity of the vaccine lymph now or recently supplied by the Local Government Board which renders its use improper for vaccination. The answer to the second and third paragraphs is in the negative.

The Use of Preservatives in Food.

Mr. LAMBERT asked the President of the Local Government Board if he could state when the Departmental Committee on the use of preservatives in food might be expected to report; whether he was aware that summonses were being now issued by local authorities for adding to Devonshire clotted cream a small quantity of boric acid solely as a preservative; and whether he would communicate to such local authorities the undesirability of proceeding with prosecutions on this point until the report of the Departmental Committee had been issued.—Mr. CHAPLIN replied: I am informed that some delay has been occasioned by a series of experiments the issue of which will not be known for some months yet, but the Committee hope to complete their report by the end of this year. I understand that some local authorities have recently instituted proceedings in cases such as those referred to in the question. The Local Government Board, however, have no power to prevent such proceedings being taken, and they could not undertake to interfere with the discretion of local authorities in the matter.

Famine Administration in India.

In introducing the Indian Budget, Lord GEORGE HAMILTON made a long and interesting statement on the famine and the steps which were taken by the Indian Government to alleviate its consequences. He explained that the affected area in this case is greater than in 1876 or in 1896. In the former year the affected area was 205,000 square miles with a population of 36,000,000 and in the latter 275,000 square miles with a population of 52,000,000, while this year the area is 420,000 square miles with a population of 62,000,000. On the subject of administration Lord GEORGE HAMILTON said: The conclusion at which I have arrived from a careful study of the famine of 1896-97 and from my previous experience of the famine of 1874 is that the first essential of successful famine administration is to get the people to come in early, when they are still in good physical condition. If that is done then it is easy enough, but if, on the other hand, from various reasons, the people will not come on the relief works until the last stage of exhaustion and inanition, their vitality is so low that it is almost beyond the powers of the authorities to revive them. They bring with them the germs of disease which they communicate to healthy persons. Almost all the criticisms which have been hostile to the administration of famine relief have been devoted to the conduct of famine affairs in the province of Gujarat, and the province has not been afflicted by famine or drought for nearly 100 years. The mortality in Gujarat has been exceptionally high. It has been a source of the greatest solicitude both to myself and the Viceroy. I have been in constant communication on the subject, but it is exceedingly difficult to put your finger on any error which has been made. The expenditure per unit there on relief is higher than in any other part of Bombay. The works there are more numerous, and the number of additional officers drafted there is higher than in any other part of Bombay. The collection of the land revenue has been almost infinitesimal. Undoubtedly the result, so far as mortality is concerned, is not satisfactory. Whenever operations are over it has been the practice to appoint a commission of inquiry to investigate the various methods adopted. We shall have recourse to this procedure when the famine is over, and I hope that the collection of facts and the expression of opinions may be of use to the officials of the locality in dealing with subsequent outbreaks.

FRIDAY, JULY 27TH.

Preservatives in Food.

Mr. LAMBERT asked the Attorney-General whether, as a Departmental Committee was now scientifically investigating the question of adding preservatives to food, and would report by the end of the year, he would send an intimation to all judicial authorities before whom any cases of adding preservatives to Devonshire cream might be brought, that it would be expedient to adjourn the proceedings until after the Departmental Committee has given its decision.—The ATTORNEY-GENERAL replied: I have no authority to interfere with the discretion of the judicial authorities in the way suggested in the question, and it would be most improper for me to attempt to do so.

Enteric Fever at Bloemfontein.

Sir WALTER FOSTER asked the First Lord of the Treasury if the South African Commission would be able to inquire into the insanitary conditions which led to the outbreak of enteric fever and the consequent overcrowding of the hospitals at Bloemfontein.—Mr. BALFOUR replied: It will rest with the Commission themselves to determine the scope of their reference, but my own impression is that if the insanitary condition was due to the neglect of the Medical Department it would undoubtedly come under the cognisance of the Commission. If, on the other hand, it was due to military necessities—as, for instance, to the insanitary condition of the camp following on Paardeberg—I imagine it would not come under the survey of the Commission; but that is my own personal impression. The Commission have full liberty to determine their own reference.

The Army Medical Department.

This department was discussed at considerable length while the House was in Committee of Supply on certain supplementary army estimates.—Sir WALTER FOSTER spoke of the establishment being dangerously low. He said that the Royal Army Medical Corps was so diminished in number and so starved as regards medical equipment that if a division were to be sent to China now, and a German division of the same strength went out, it would be found that the German force had probably 50 per cent. more medical officers than our force—a state of things which, he said, would be discreditable to this country. In Africa many hundreds of brave fellows had been lost from the want of proper medical appliances. In China they had the danger of a disease more serious and loathsome than enteric fever. Plague was prevalent in that empire at the present time, and our troops would be exposed to sanitary dangers of the gravest kind. He hoped, therefore, that the War Office would be wise enough to take precautions against an outbreak of plague, or, at all events, would endeavour to minimise its effects as much as possible. He urged the War Office to consider the establishment of a reserve medical corps. It would not be difficult, he said, to get a large number of young medical men to hold themselves in readiness under very easy conditions to accept service in case of national necessity. Another point urged by Sir Walter Foster was that the War Office, in addition to sending out civil surgeons to South Africa, ought to have sent out civil physicians, men of experience in connexion with the fever hospitals of this country and others.—Mr. BURDETT-COUTTS complained of the Army Medical Department having no transport of its own and in this connexion called attention to the important services rendered by the Irish Hospital and the New South Wales Field Hospital, both of which, he said, have their own transport. He insisted that the Royal Army Medical Corps had been undermanned in medical officers, orderlies, and nurses, and said this was the explanation of the sick and wounded not receiving proper attention. On the subject of nursing Mr. Burdett-Coutts said the objection of the department at home to female nurses ought to be overcome.—Sir JAMES FERGUSSON said he had good reason to believe that often there had been a deficiency of articles of first necessity in the field hospitals because the medical officers were afraid to demand the things they wanted, and he submitted that such a thing would not happen if medical officers had now, as they used to have, a settled position from which they could not be removed except for some grave failure of duty.—Dr. FARQUHARSON emphasised the need for sufficient transport for the department.—Mr. GEORGE WYNDHAM, in his reply for the War Office, spoke of the recent changes in the Royal Army Medical Corps. The present Secretary of State, he said, had proposed an establishment higher than had ever previously existed, and had not been able to obtain the number of officers he required. It was said that was because the rewards offered were not sufficient, but, acting on the advice of his military advisers, he had offered inducements to tempt young physicians to enter the Royal Army Medical Corps, and was it fair, when it was matter of common knowledge that the great medical colleges had boycotted the corps for years in order to exact concessions as to rank—was it fair, when their wishes had been met to attract competent physicians, to attack the Secretary of State because he had not sufficient officers to meet the situation? He would not dwell upon this, for the point had already been threshed out, and what was to be said on either side was well known to the Committee. In view of the efforts made to increase the Royal Army Medical Corps, in view of the fact that the establishment voted had not been reached, he was convinced that it was a question of organisation that demanded most careful attention and most strenuous effort at the end of the war. But they could not do this now. It was his belief that no increase of pay, no exaltation of rank could be expected in times of peace to attract a sufficient number of young, keen, and ambitious men to fill up the places that must be

filled up in time of war. A young medical man did not care to bury himself at Colchester or any other military centre to attend to a few hundred men suffering from the customary ailments of this country; he was ready to work for little or no remuneration in the slums of a great city or in the wards of a great hospital; he wanted the practice and experience necessary for a successful career. Therefore he had himself come to the conclusion that instead of striving to expand the Royal Army Medical Corps in time of peace to be adequate for the time of war, it would be necessary to make application to the great hospitals throughout the country to know in time of peace what men would be ready for service in time of war, or when there was large concentration of troops what men would be ready to come forward and work for the army as they would work in a great city in time of pestilence.

MONDAY, JULY 30TH.

Specialists for Invalided Officers.

Mr. BAINBRIDGE asked the Under Secretary of State for War whether, if an officer invalided home from the seat of war required the attention of specialists while in a military hospital in England, it was the rule that such advice had to be obtained and paid for by the officer himself or his relatives.—Mr. WYNDHAM replied: If the medical officer in charge of a patient is of opinion that the assistance of a specialist is required the cost would be borne by War Department funds.

Post-Graduate Course of Naval Medical Officers.

Dr. TANNER asked the First Lord of the Admiralty if the long-promised concession in favour of naval medical officers which was stated some months ago to be settled for immediate working, viz., giving medical officers the opportunity of visiting and studying at metropolitan hospitals for a period of from three to six months on their return from a long term of foreign service on full pay was now working; and, if so, how many officers have availed themselves of the concession.—Mr. GOSCHEN replied: Naval medical officers have for many years past been permitted to pass through a post-graduate course at metropolitan hospitals. The number allowed has by the regulations of Nov. 1st last been increased from seven to 20 annually, but owing to the despatch of a considerable number of naval medical officers to the Cape and China it has not yet been found possible to allow this increase to take effect.

WEDNESDAY, AUGUST 1ST.

Medical Acts Amendment Bill.

The Bill framed by the General Medical Council to strengthen it disciplinary powers and to enable the universities and other medical licensing bodies to withdraw their diplomas from practitioners whose names had been removed from the Medical Register for misconduct, was at this sitting of the House withdrawn. It was withdrawn presumably because there was no chance of getting it passed.

THE SOUTH AFRICAN COMMISSION.

Lord Justice Romer (President of the Commission), Dr. W. S. Church (President of the Royal College of Physicians of London), Professor D. J. Cunningham (Trinity College, Dublin), Mr. Frederick Harrison (General Manager of the London and North Western Railway), Sir David Richmond (ex-Lord Provost of Glasgow), and Major Tennant (secretary), commenced their labours on July 24th, when a statement (a summary of which was printed in our issue of July 28th) referring to the terms of reference and to the course to be adopted in taking evidence was made by the President. The Commission sat at Burlington Gardens.

Among the first witnesses called on were a number of departmental officials who detailed the routine followed in equipping the army. Surgeon-General JAMESON, Director-General of the ARMY MEDICAL Department, said that immediately on the outbreak of war it was found that the medical *personnel* for two army corps and a cavalry brigade were exhausted. The number of medical officers in South Africa on Sept. 1st, 1899, was 32. During September 19 were sent out; in October, 138; in November, 102; in December, 38; in January, 1900, 44; in February, 48; in March, 50; in April, 10; in May, eight; and in June, 19; making a total of 508. This month 20 more were being sent out. The figures did not include the medical officers of colonial contingents.

Lieutenant-Colonel Johnston, Assistant Director A.M.S., and Major W. G. Macpherson, Deputy Assistant Director A.M.S., were also examined.

Lieutenant-Colonel J. S. COWANS, Deputy-Assistant Quartermaster-General, said that every requisition for extra medical men had been complied with.

General Sir HENRY BRACKENBURY, Director-General of Ordnance, said that in every case in which the goods were requisitioned they had been supplied, but they were dependent entirely on the trade for supplies and there was great difficulty in obtaining them in sufficient quantities. There had been no complaints of delay.

Colonel STEEVENS, Principal Ordnance Officer, and Sir RALPH KNOX, Permanent Under-Secretary, having given evidence, Colonel STIRLING RYERSON, Canadian A.M.S., British Red Cross Commissioner, said he had gone round the hospitals every morning to see what was needed and to distribute medical comforts. No complaints had been made to him. He thought that the abolition of the office of sanitary officer had much to do with the enteric fever epidemic.

WEDNESDAY, JULY 25TH.

The first witness called was the Rev. W. H. ORFORD who was in Bloemfontein from the entrance of the British troops until Lord Roberts left for the north. The hospital to which for two months he was attached, he said, was one of the worst in the district, because it was an old building. Everything was done to make it as comfortable as possible and there was no overcrowding. It was true that patients were lying on stretchers and mattresses and in some cases patients were not undressed for a fortnight. The patients in the hospital numbered 60, and the nursing was done by orderlies whom the men did not obey as they would female nurses. Everything was improved after the hospital had been in use a fortnight. In reply to a question with reference to other hospitals he said that he had never seen men lying in the mud.

Sir HOWARD VINCENT, M.P., described his visits to the hospitals in South Africa and expressed his belief that there was no real cause for complaint. There were some deficiencies but he could not speak too highly of the general arrangements.

Mr. WATSON CHEYNE, F.R.C.S. Eng., said that of course there had been over-crowding in the field hospitals, but that was the fault of equipment. He did not think the medical service was cut down to the same extent as the ordinary transport. At Paardeberg men were put under trees because there were few tents. Being out in the open did not affect the patients at all, for it was a beautiful time of the year. Personally he preferred being out in the open. The supply of dressings was rather short. The number of wounded was greater than expected or the ambulance service would not have been cut down, but the medical comforts were to be obtained. The only hardship was the long distance the men had to be sent back in ox wagons. The St. John Ambulance men were not good as orderlies owing to their want of training. At Driefontein it was quite impossible to collect the wounded for several hours owing to lack of ambulance accommodation. He was at Bloemfontein from March 13th till April 20th or 21st, during the greater part of which time the enteric fever epidemic was at its worst. He believed there were more cases in May. Within five days of reaching Bloemfontein Dr. Stevenson had arranged accommodation for 500 or 600 sick. There was a lack of beds but there was no particular fault to find with the houses used. Those who had no beds were accommodated on tressels. About April 20th they had had over 300 deaths in a 50-bed hospital. He thought there was a point which the medical members of the Commission might consider—namely, how far this epidemic was one of typhoid fever. The great majority of cases recovered in 10 days or a fortnight, and there were other characteristics which made him think that it was not typhoid fever. He had never heard that there were any men, sick or wounded, left without any covering at Bloemfontein, neither had he any reason to believe that men did not get the rations prescribed for them. The hospital accommodation at Kroonstad was bad. The orderlies tried to do their best, but many were untrained men, and if their best was not good that was another matter. No neglect of the sick and wounded came under his notice in any way. He was of opinion that an unnecessary amount of the time of the medical staff was taken up in administrative and clerical work.

A trooper in the City Imperial Volunteer Mounted Infantry was examined and said he fell sick at Sanna's Post and was treated with every possible kindness at Bloemfontein. The only discomfort he experienced was a ride in an ox wagon.

The Commission then adjourned its sittings in London till Monday, July 30th.

On Friday, July 27th, the Commissioners visited Netley and took the evidence of wounded and invalided soldiers from the front.

MONDAY, JULY 30TH.

The Special Commission appointed to inquire into the care and treatment of the sick and wounded during the South African campaign held another meeting on Monday, July 30th, at Burlington Gardens for the examination of witnesses. All the members of the Commission were present except Sir David Richmond.

Captain COUSENS of the City of London Imperial Volunteers was the first witness examined, and in reply to the CHAIRMAN (Lord Justice Romer) he said that when he got to Greenpoint camp he found that the men from the hospitals came there, and it was his habit to speak with them about their experiences, and he assured the Commission that he never heard the slightest complaint from them. On the way up country he fell sick from heart disease and debility just before Edenberg and along with six of his men he was taken to the Portland Hospital at Bloemfontein. He himself was in the hospital for eight days and he had not the slightest complaint to make about the treatment which he received. Everything was done that could be done. He saw no cause for complaint in any part of the hospital. He left the hospital on April 3rd and stayed in a hotel for six weeks during which time he visited No. 9 General Hospital. He visited this hospital twice and saw not the slightest cause for complaint. While at Bloemfontein he saw all sorts of men from his own and other regiments and he was sure that if they had had cause for complaint they would have mentioned it to him, but they made no complaint. He was sent down from Bloemfontein to Wynberg where also the arrangements were in his opinion excellent.

Mr. MURRAY GUTHRIE, M.P. for Bow and Bromley, was the next witness, and in answer to the CHAIRMAN he said that he went out to South Africa as secretary to the American Field Hospital, getting there in the beginning of February. He went first to Kimberley and afterwards left the hospital and went across to Bloemfontein, which place he reached about four days after Lord Roberts. The first hospital he saw in working order was at Driefontein after the battle at that place. There were about 430 cases in the field hospital when he saw it—nearly all wounded, but also some fever cases. He thought that the medical officers did everything that they possibly could do, but they seemed to be rather short of supplies, which was only natural in the circumstances. There were about 30 or 40 stretchers, and the rest of the men, of course, were lying on the ground. He spoke to many men and they quite realised that it was impossible for things to be otherwise; there was no grumbling. The worst cases were on stretchers and the remainder, Boers and British, were lying against the sides of wagons and the walls of houses. They were short of everything except meat, but this was unavoidable for it was the end of a march. One of the medical officers had been working for 13 hours on operations, and all of the medical men were working like slaves. The medical officers themselves had no better food than the wounded. He knew that because he dined with them and they had only the ordinary rations. A field hospital was not supposed to have 430 cases, and naturally they were short of everything—medical officers, orderlies, stretchers, tents, &c. He saw the convoy leaving. To the best of his recollection there were 15 ambulance wagons and some 30 or 40 bullock wagons, and the distance was about 30 miles over extremely rough roads. The weather was very hot and he remembered thinking that the wounded men would have a terrible journey. It would have been better if it had been possible to send them all in ambulance wagons. For himself he did not see any merit in the ambulance wagon except that it had a cover and the ox wagon had none. Of course, if a man lay down in an ambulance wagon he had a flat surface to lie upon whereas in an ox wagon there were ridges and rough places which could not be very agreeable to a wounded man. The medical officers said that they had very hard work, but they

were perfectly cheerful and they did their very best and made no complaints. All they were anxious about was to get the wounded down to Bloemfontein. This, of course, was a question of transport. If there had been sufficient transport the wounded would never have been left there, they would have gone straight into Bloemfontein. The ordinary ambulance wagons were not sent up, they were reduced by four-fifths, from 10 per cent. to 2 per cent. When he left Driefontein he went to Bloemfontein. At the latter place he resigned his appointment as secretary of the American Field Hospital and he occupied the office described in the army orders as "distributor of military comforts." His business was to receive and arrange for the transport of all goods sent out from England for the men at Bloemfontein. The appointment was given him by Lord Roberts and was under Government. He was at the railway station all day long and had an office there and a staff. He was generally there from six in the morning till at least six in the evening with intervals for meals. By-and-by things got slack in his office and when he had leisure he went about the hospitals and he supposed that he visited every one of the hospitals at Bloemfontein. At first he went casually, say to see an official or a patient he knew, but towards the end of April and the beginning of May he took special pains to visit the hospitals because he had heard a good deal about what was going on in them. The first hospital he saw was the Imperial Yeomanry Hospital, and though it had not been long established he could see that it was by far and away the finest hospital in South Africa. So much was this the case that he was almost shocked by the money spent upon it. The wine-glasses had the Prince of Wales feathers engraved upon them in gold and everything was absolutely perfect; it was just like Guy's Hospital put down in the middle of the veldt. The inference to be drawn from this state of things was that if a private hospital could do so well why could not the hospitals of the Royal Army Medical Corps do better than they did? A great many people said that the Corps had no power of organisation. He was taken over No. 8 General Hospital by the sister superintendent. This hospital was under canvas and was situated about a mile from the town. He did not see anything very bad. The marquees were good. He found men lying in the bell tents very crowded. They looked in rather a bad state and the sister superintendent said that it was impossible to go near them; he supposed that they were attended to by the orderlies. One man asked for his medicine and they hunted up the orderly. They found the orderly and he was convinced that the man was doing his best, but the work was too much for him. There were enteric cases and dysentery cases, and the patients were lying in their clothes. They had been in their clothes for days, and some of them had not been diagnosed. Some of them had been in these tents for 48 hours and certainly they were in a pitiable condition. These men were in the bell-tents because there were no marquees for them. As soon as there were vacant marquees the worst cases were taken from the bell-tents and put into them. When they reached the marquees the men were undressed and washed and properly nursed and dieted. There were not enough nurses for the marquees, to say nothing of the bell tents. He could not speak too highly of the work of the medical men of the Royal Army Medical Corps and the nurses and the orderlies. Although there might be black sheep amongst them he never came across one, and he never came across anybody who shirked his work. He heard no complaints from the men who were in the marquees. So far as his experience and knowledge went, though the hospital was short-handed there was no absence of medical equipment or medical comforts. As for the men in the bell tents they made very bad complaints. Some of the cases were slight cases for which the bell tent was good enough, but others were serious, and no doubt there were far too many in each tent. In answer to Dr. CHURCH, the witness said that the feature of the Yeomanry Hospital was that it had fewer orderlies and more nurses than the military hospitals. Some of the men in the bell tents were semi-conscious only; some of them were very ill indeed and greatly in want of attention. In answer to the CHAIRMAN, witness said that he saw every hospital in Bloemfontein. In one case several men complained to him about their diet; they said that it was not good, and they complained that there was no fresh milk. He considered that there was cause for complaint about the milk-supply in Bloemfontein. Except for one or two cases he did not remember being without milk for his porridge in the club or hotel where he stayed. He thought that the milk of the town ought to have been requisitioned for the hospitals, which never had a sufficient supply. He felt certain that if proper steps had been taken the necessary milk for the hospitals might have been got in the town. He did not think that the convalescents were well looked after in their journeys and he gave as an instance a train he boarded on its way from Bloemfontein to Cape Town, which had 268 patients in charge of a single doctor and no orderlies. The Irish Hospital, he said, was as near perfection as could be found. The reason why these private hospitals were so much better than the military hospitals and why their death-rate was so much lower was that they had the power to refuse to take in more patients than they could look after properly. They might accept a few more patients than they were intended to accommodate, but they were never overcrowded. The patients whom they refused had of course to be sent to the military hospitals. In answer to Professor CUNNINGHAM witness said that he was of opinion that the medical officers, orderlies, and sisters connected with the Royal Army Medical Corps did everything that was possible with the resources at their command to make the patients comfortable, but he thought more might have been done by the higher authorities of the service. In the shops of Bloemfontein there was much that ought to have been bought immediately by the medical authorities. They could have had 25 or 30 mattresses turned out every day which would have been of great assistance in the hospitals and he knew that blankets were bought by private individuals and presented to the hospitals. In his opinion every blanket in the town ought to have been bought by the medical authorities. He thought that the principal medical officer ought to have looked after such a matter. He ought to have requisitioned every single thing in Bloemfontein which would be of any good to the hospitals, and he (Mr. Murray Guthrie) was perfectly certain that if he had done so he would have got a great many things. Not only so, but there were many buildings in Bloemfontein which might have been used for hospital purposes. One morning he was on the station platform about six o'clock on the look-out for some trucks which he expected. He walked along the line some distance and came across an open truck with 15 men in it. He looked at them and passed on, the sight being a common one. About 8 o'clock the truck was moved up to the platform close to his siding and he thought that the men were going to be taken out, but when he came back from breakfast about 9 o'clock or half-past 9 the truck was still there. At half-past 10 o'clock he asked the railway staff officer whether the men were going to be taken out and he said that it was none of his business and that he had no men to move them. A few men loafing about the station were picked up and the sick men were moved from the truck and ranged along the platform on the ground against the wall. They were all lying-down cases. Some of the patients were suffering from enteric fever and some of the cases were not diagnosed. Of the 15 there were eight who were stretcher cases. About 11.30 one of the men had his lips absolutely black. Witness asked one of them the history of their journey and he gave it to him. They had been upon an average about 48 hours in coming down to Bloemfontein from different places. There were eight cases which were certainly bad ones, and he gathered from the man in charge, who was not a hospital orderly, that the eight men had had among them during the 48 hours two tins of condensed milk. Witness opened one of his cases and gave the men bovril and milk. At two o'clock the men were still on the platform. Not the slightest attention had been paid to them. This was in May; not at the beginning of the campaign. He communicated with the principal medical officer, who told him that he had not been advised of the despatch of the men. He said that the civilian doctors constantly neglected to advise him of the despatch of patients, and it was not until ten minutes to 3 o'clock in the afternoon that the men were taken to one of the hospitals. This was not at all an uncommon case; it was a case that occurred almost every day. In answer to Dr. CHURCH he said that it was nobody's business to send a message to a general hospital that the men were at the station, and in answer to MR. FREDERICK HARRISON he said that the railway staff officer had to see to the despatch of the train. He understood that since then a medical officer and an orderly had been placed at the station. In reply to the CHAIRMAN he said that when he went to Pretoria he had a conversation with Sir William Thomson, head of the Irish Hospital, who told him that things were in a bad way there, and that in the Irish Hospital they were very short of things and had 50 men lying on the ground. On June 14th he visited the seven hospitals in Pretoria and found them short of everything. He consulted the manager of the Natal Bank and asked him if he would be willing to form a committee to provide the material required, provided witness could get the sanction of the commander-in-chief. He consented and witness received the sanction of Lord Roberts. They set to work and got from the shops of Johannesburg a whole trainload of things which were distributed among the hospitals. No steps had been taken to buy anything either in Johannesburg or Pretoria by the medical authorities. The proper course of these authorities would have been to buy up everything instead of waiting for supplies to come up from Cape Town. That was what the Army Service Corps did when they entered a town, and in consequence they lacked nothing.

MR. R. E. LAUDER, the next witness, said in course of examination that he went out in charge of the Southampton Ambulance Corps, and after being attached to No. 5 General Hospital at Greenpoint camp he acted in a stationary hospital on the Orange river. Afterwards he went with the mounted troops to Kimberley. In all his experience he saw no reasonable cause of complaint. He confessed that things were not always so desirable as one could wish or as one found them in a civil hospital, but if he were asked whether all the resources at command were utilised he would reply in the affirmative. When engaged in outpost duty near Bloemfontein he found great difficulty in getting milk for the patients.

Dr. W. M. RUSSELL, senior house surgeon at Kimberley Hospital, said that he was about two years at Kimberley and went through the siege. During the siege they had a good number of sick and wounded and they were all fairly well cared for having regard to all the circumstances. They had plenty of drugs and surgical appliances and everything else pertaining to a hospital. The only serious drawback they had was that towards the end of the siege they experienced some difficulty in getting milk. After the siege they found it necessary to open up certain buildings as temporary hospitals, the Kimberley hospital not being able to accommodate all the patients. About 40 buildings were selected as temporary hospitals, and they were filled fairly rapidly with cases of enteric fever and so-called dysentery. Of course there was a little trouble immediately after the siege, but the Red Cross Society sent up a train with supplies.

Mr. FREDERICK TREVES then gave evidence. He explained his position with General Buller and the movements of his hospital, which he described as an advanced field hospital. The hospital, he said, worked admirably. There was an immense rush of work after the battles of Colenso and Spion Kop. Some of the orderlies were indifferent, but on the whole they worked well. No doubt there were many things that stood in need of improvement. The difficulty was the difficulty of transport. For one month they were 26 miles away from a railway and such difficulties as presented themselves arose from transport. His hospital had its own transport. It was a field hospital originally equipped for 300 patients and they ultimately had to take in 800, but from Frere to Potgieter's Drift and back to Chieveley they had their own transport consisting of 260 oxen and 60 mules. They found this arrangement to work admirably and not to conflict in any way with the military arrangements. They were admirably situated in the matter of medical equipment. At times they were short of food—as, for instance, at Spearman's camp—but it was nothing unreasonable and he heard no complaints. The nursing problem was the most serious of all. He quite acknowledged that it was impracticable to have female nurses in a field hospital. He had his own two nurses with him, but that was possible because he had special provision for them. At a stationary hospital female nurses would be of the greatest possible service. There could be no doubt that they were short of utensils, this being due in their case to an oversight—they were lamentably short in this respect. He could say most emphatically that he never came across a serious case of neglect of the sick or wounded. In his opinion the wounded or sick soldier preferred the ox wagon to the ambulance and for this reason that the former was made for the country and ran smoothly. He went over all the hospitals at Pietermaritzburg and found in them no reasonable cause for complaint and he might say the same thing about Durban.

Dr. C. W. J. CHEPMELL, who acted as an Assistant Commissioner of

the Red Cross Society in Natal, gave evidence to the effect that the military hospitals in that colony offered no reasonable ground for complaint.

Nursing Sister BARWELL said that she went with the Army Nursing Reserve to South Africa, reaching Bloemfontein on March 24th. On April 2nd a considerable number of wounded were brought from Sanna's Post to Gray's Hospital where she was employed and new rooms had to be opened for their accommodation. For several days it was impossible to provide these rooms with beds and the patients were placed upon stretchers. There were two medical men and six sisters, the patients were well looked after, and there was no ground for complaint, except, perhaps, that they were badly off for some of the minor equipments.

Dr. A. CONAN DOYLE, the last witness of the day, stated that his experience was confined to the hospitals at Bloemfontein. He arrived in the town on April 2nd and stayed three months. He was connected with the Langman Hospital, which was equipped for 100 patients but at one time received 150 patients. He was sure that the pressure on the army hospitals was many times greater than that on the Langman because the former could not refuse patients. He and his colleagues were so busy that when they got out of their own hospital they did not think of going to visit another, but so far as he knew he did not believe that anybody could be charged with neglecting the sick and wounded. There were some defects but they were due to the wishes of the medical staff being overruled for political considerations. In other words, he held that there should have been less consideration for the Free Staters and more for the sick and wounded.

The Commission then adjourned.

TUESDAY, JULY 31ST.

The Commission met again to-day, when there was a full attendance of members, Lord Justice ROMER presiding.

Mr. W. BURDETT-COUTTS, M.P. for Westminster, presented himself for examination.

The CHAIRMAN explained to him that he and his brother Commissioners had read the articles in the *Times* and the speeches of the hon. Member in the House of Commons, and therefore it would not be necessary to go over familiar ground again.

Mr. BURDETT-COUTTS, in answer to questions by the CHAIRMAN, said that until he went to Bloemfontein he saw nothing to complain of in respect of the hospitals which he visited except in the case of the Woodstock Hospital. With regard to this hospital he complained of the site being badly chosen. Indeed, Surgeon-General Wilson himself told him that he was altogether dissatisfied with this hospital, that he did not think the building or the condition of it suitable for a hospital, that they had had to take it, that it was not, so to speak, a hospital of their creation; and witness, believing it to be a temporary expedient, abstained from mentioning the hospital in his letters. When he got back to Cape Town he found that the hospital had been improved and enlarged, and what he complained of was that it was not a proper place to take as the nucleus of a large general hospital. He arrived at Bloemfontein on April 7th and on May 1st he left for Kroonstad, returning to Bloemfontein about May 19th. Dealing with the state of things at Bloemfontein Mr. Burdett-Coutts said that the field hospitals reached that place in a more or less mutilated state. The field hospital described in his article was visited by him first on April 9th and he found it in a very bad condition. He did not think it right to describe it in his article because he considered it as more or less the outcome of the forced march. It was not until the railway had been running freely for nearly a month that he considered it fair to criticise the medical arrangements. With regard to No. 9 General Hospital, its tents and nothing else arrived at Bloemfontein on April 8th. These tents provided accommodation for about 800 patients. It was not until a fortnight later that the equipment for the tents came up and it was possible to put patients into them. His criticism had been, and was, that it would have been better to have sent up the tents and equipment for 400 patients in the first instance instead of sending up tents for 800 patients which were quite useless without equipment. In his letter which appeared in the *Times* on June 27th there was a phrase about "growing scenes of neglect and inhumanity." These words had been taken hold of and used in a sense which he had never intended. When he spoke of inhumanity he meant inhumanity which would arise from medical deficiencies. He had not the slightest intention of making any reflection upon the *personnel* of the Royal Army Medical Corps. He considered that their work had been magnificent and that they had performed their work in tremendous difficulties—difficulties which they ought never to have had to encounter. Examined next as to the state of the field hospital mentioned in this letter Mr. Burdett-Coutts said that the equipment in many respects might easily have been improved. All that was wanted for a mattress was a bag and something soft to put into it and if there had been the necessary initiative and energy in regard to such things he thought that beds might have been extemporised in a very few days for a large number of the patients. It was, of course, no hardship for a healthy man to lie on the ground but an enteric fever patient, aching and suffering, must have felt the ground very hard. Moreover, he had always understood that it was well to have a sick person raised off the ground. Many enteric fever patients passed the whole period of their illness in the field hospital. Serious cases could not be sent down to the town hospitals for the simple reason that the latter were crowded.

The CHAIRMAN: You say that there was want of initiative. Who was to blame for that?

Mr. BURDETT-COUTTS: I have endeavoured always to avoid putting blame upon individuals. In further examination witness said that in going through the bell tents he saw a man who the doctor told him was dying and witness could see that he was dying. He saw men lying in the mud. There had been torrential rain and it had got over the trenches and into the tents.

By Sir DAVID RICHMOND: He saw a large portion of the Russo-Turkish war and he was bound to say that he saw very much the same things at the front in Turkey as he saw in South Africa. Most of the statements he had received had been accompanied by a request that the name of the informant should not be given. In a few instances he had written to his correspondent and pointed out the protection and precautions referred to by the Chairman of this Commission in opening the proceedings, leaving it to him to decide whether or not he should tender evidence to the Commission. The statements which he had received came from various classes of people all of whom appeared to be convinced that it would injure their present or their future if they came forward with evidence.

The CHAIRMAN: There would be no injury. We should protect them amply and fully and we should be able to give them the necessary assurance.

Mr. BURDETT-COUTTS: How would you protect an officer, for instance, who considered that his future would be injured?

The CHAIRMAN: By not giving his name and not allowing his evidence to appear.

Mr. BURDETT-COUTTS: Will the evidence be seen by anybody?

The CHAIRMAN: Only by ourselves, and the evidence can be taken in such a way that nobody shall know that he has been examined.

Mr. BURDETT-COUTTS, proceeding with his evidence, gave figures to substantiate his statement in the *Times* letter that there were 20,000 sick and wounded in South Africa at the time of writing. No. 9 General Hospital he visited three times or more. He was struck by the absence of classification. The conditions of crowding were not so bad as in the field hospital to which he had referred, but a great many patients were together in what he considered a very unhealthy spot. The level of the hospital was low and a great remount compound was close to it and drained into it. When he arrived at Kroonstad he found the field hospitals with a great many sick in them. Four days after his arrival a large hotel was commandeered and made into a hospital, and this proving insufficient a Dutch church was also commandeered, and the staff of the field hospital of one of the brigades was taken to run these two hospitals. It consisted of three medical officers and six nursing orderlies in the hotel and four untrained orderlies in the church and among them they had to look after 300 patients. There were no medical comforts in these places and no beds, and none of the ordinary equipments of a hospital. A certain number of beds and mattresses were two days afterwards got hold of. He saw sick and wounded brought into the church and placed upon the stone floor in their uniforms with possibly a blanket underneath them. When these 300 patients were in the church and the hotel they had only two medical men to attend them, for the third medical man had his time taken up in trying to get things and to organise the place. What he felt about the matter was that they might have taken up on the march sufficient medical officers and orderlies and a light equipment which would have obviated the first 10 days of difficulty and pressure at Kroonstad. Before leaving Bloemfontein he bought a wagon and four mules. At the time there were four other wagons at Bloemfontein of which he had the choice, and the man who sold the mules to him said that he had 70 altogether. If the medical authorities had secured this means of transport they might have taken up medical men, orderlies, and light medical equipment. He himself had fresh milk at Kroonstad, but when he asked one of the practitioners whether he had any at the hospital he simply laughed at him. Witness wrote to the military secretary of Lord Roberts on the subject, calling his attention to the fact that the hospital had no fresh milk. In reply he received a letter stating that Lord Roberts, in company with his principal medical officer, had visited the hospital on the same day as witness, and that the principal medical officer had told Lord Roberts that the hospital was getting a large and increasing supply of fresh milk. One of the great difficulties of the situation was that the medical officers were not sufficiently resolute in asking for what they required for their hospitals. With regard to Woodstock he could present a witness who would say that operations were performed on the tables on which food was served, and that the utensils used for operations were also used for the feeding of the patients and that blood had been found on the edge of them. He could give the name of a witness who would say that at the convalescent camp at Greenpoint there were several dangerous cases of enteric fever and that the rations consisted of hard biscuit and bully beef. On the general question he thought that there was a great want of elasticity about the Army Medical Department. There were no reserves at home. He admitted that they could not maintain in time of peace the medical service required in time of war; but that made it all the more necessary to have a system capable of expansion when the necessity arose. There was, he believed, an objection in the department to female nurses and to the civil element altogether. If the system had been sufficiently elastic the three general hospitals at Cape Town could have been turned into civil institutions, and the military staffs set free to go to the front, which was their proper place. During the last 50 years the conditions of everybody had been enormously improved except those of the British soldier during a great war. His lot had not improved, and he himself did not know what medical treatment was, what it might be, and what it ought to be. If the British soldier were to be put on a gridiron and roasted, and to be told that that was the way to kill the germ of enteric fever, witness supposed that he would submit to the treatment, because the British soldier was brave and thought that bravery consisted of standing any hardships in sickness as in fighting. The opinion of witness was that they had no right to trade upon this ignorance and this bravery.

Private HAROLD MEADMORE of the Royal Horse Artillery gave evidence as to his experiences in various hospitals at Bloemfontein and Cape Town.

Sir WILLIAM MACCORMAC, President of the Royal College of Surgeons of England, who was the next witness, gave to the Commission an account of the journeys that he made in the Cape Colony and Natal and the hospitals of one kind and another that he visited. The impression he received from seeing all these places was, he said, that the arrangements in general were simply admirable, and, he thought, would compare—and he spoke not without considerable experience—favourably with the arrangements of any previous campaign conducted by any nation in any part of the world. At Colenso, where he had the opportunity of seeing the three hospitals working in the field, there was, of course, very great pressure, but the pressure was absolutely inevitable, for it was impossible to provide for the cases that came in during and after such an engagement. In his opinion the pressure was met as well as it possibly could be met. Each field hospital had two operating-tables and these tables were in use continuously. The way in which the wounded were removed from the field on one occasion deserved, he thought, special notice; it was remarkable for promptitude. The whole of the wounded on the field of Colenso had been removed by about 3 o'clock in the afternoon of the day of the battle. He did not think that such a thing had ever happened before in war. The provision made for this was distinguished by remarkable foresight. The principal medical officer, Colonel T. G. Gallwey, with the knowledge that previous experience had given him, devised a plan whereby the services of some 1200 stretcher-bearers were obtained from among the refugees in Durban. Some of these bearers were perhaps not the most eligible members of society, but all these men worked exceedingly well and exposed themselves to all manner of risks and dangers. Some of them

were killed, many were wounded, and they worked for a wage of 5s. per day. They brought the wounded off the field by means of stretchers and brought them with the minimum of suffering. The less severely wounded were removed by ambulance wagons, which meant a terrible experience in a country where there were no roads but many stones. The hand carriage devised upon this occasion was the ideal mode of transport, especially in such a country. He should like to emphasise very strongly the fact that the principal medical officer in Natal availed himself of the opportunity which offered and organised, under the authority of General Buller, this ideal mode of transport which proved the greatest solace and comfort and saving of life to the wounded men. Another feature of the battle of Colenso was the hospital train, which was brought on to the field of battle and was under fire. This train was filled with wounded who were brought down to one of the stations on the line. Another thing was that in spite of the stress the operations in these field hospitals were conducted with every care, with the assistance of every modern appliance, and with the same precautions as those which were adopted at home, and really he thought credit and praise of no unstinted kind should devolve upon those men who did this work on the battle-field of Colenso. The wounded men came to the field hospitals ticketed with their names and numbers and the nature of their injury, which was of immense value to the surgeons. The result of the rapid evacuation of the field hospitals was that two days after the engagement all the men had been sent down to the stationary hospitals and the base hospitals or to the ships at Durban. This was a great contrast to his experience at Sedan, where there were men who lay upon the field of battle for three, and some for four, days before they received succour of any kind. He thought that there could be no doubt in the minds of those who watched the proceedings at the front that in a very trying emergency the medical officers met the duties imposed upon them in circumstances of extreme tension with a very complete success, and he knew from conversations with officers and men afterwards that they had the greatest confidence in the medical officers and realised that everything that could possibly be done for them had been done. As to the complaint about the prevalence of vermin he defied any person to prevent vermin in wooden buildings where soldiers were congregated. The only way to stop the vermin was the Chinaman's method of roasting pork—namely, to burn down the buildings. In the hospital bed he occupied at Sedan he had to endure not only bugs but also lice, and he had the same experience in the Russo-Turkish war. As to sanitary precautions in the camps, they had to remember that there were dust-storms and that the soldiers had to breathe the dust with which was mixed the excreta of the camp, and that caused a good deal of sickness. Everywhere the water was bad, and he did not think that any sanitary precautions could prevent a thirsty soldier after a long march from drinking the first water that came in his way. He was with the great march of Lord Roberts and no doubt the equipment was seriously reduced, but they had a mobile enemy to deal with and to catch him they had to be equally mobile. War was a cruel thing and the incidents of war were cruel, but the object of war was not the care of the sick and wounded—it was the winning of battles. Witness then quoted from his letters to THE LANCET and said he had nothing in these letters to withdraw or modify. He held to the opinions expressed in them in spite of subsequent criticisms by people who did not appear to know very much about war and its conditions. He thought that the medical were inevitable, had been exceedingly good. He was sure that it would conduct of this campaign, subject to the existing drawbacks which compare most favourably with the medical conduct of any previous campaign. In answer to Sir DAVID RICHMOND the witness said that there was no comparison between the medical provision in this campaign with that in the Franco-German war, so much superior was the former. The train in which he went down from the front in Natal was equipped with everything that was wanted. He saw no evidence whatever of friction between the officers of the Royal Army Medical Corps and the civil surgeons. In the Mooi River General Hospital there were a large number of comparatively young civil surgeons, and they and the army medical men were simply a happy family, free from the slightest trace of friction.

Captain ADAM, who accompanied the Indian contingent and was wounded near Dundee in October, gave evidence as to the state of things in the hospital on the neutral ground at Ladysmith, saying that there was not the slightest cause for complaint.

Lieutenant OSBORNE, one of the Australian volunteers, who afterwards joined the 16th Lancers, said that there was no cause for complaint about the Langman Hospital at Bloemfontein.

Lady CHAMPION DE CRESPIGNY stated that there were deficiencies in the hospitals at Kimberley. Men, she said, were kept lying on the ground outside and did not receive the comforts essential to their proper treatment. At Bloemfontein there was a boy who wanted wine and was told that he must buy it. In the train in which she travelled to Cape Town there were five wounded officers and 25 wounded men with no one to attend them. They had no food beyond what she gave them. Her opinion was that the medical officers should be given more power to get the things required by the patients under their charge.

Major BAIRDSIE of the Australian artillery said that he could not praise too highly the kindness and attention he received at the hands of the medical men and orderlies at Bloemfontein; he could not have been better treated in London. The only cause of complaint he had was that they gave him too much champagne.

The Commission then adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BERRY, R. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for Southport, Queensland.

BLACKBURN, E. W., M.B., B.Ch. Oxon., D.P.H., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Barnsley Beckett Hospital, vice J. Blackburn.

BLACKBURN, J., M.R.C.S., has been appointed Honorary Consulting Surgeon to the Barnsley Beckett Hospital.

BLAKE, STUART RYALL, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the No. 4 Sanitary District of the West Ham Union.

BOVILL, F. M., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Fourth Sanitary District of the St. Albans Union, vice F. M. G. Smith, deceased.

BROWN, G. H., M.B., Ch.B. Melb., has been appointed Officer of Health to the Lawlers Local Board of Health, West Australia.

BURCH, H. E., M.R.C.S., L.R.C.P. Lond., late Assistant Resident Surgeon, Memorial Hospital, Bulawayo, has been appointed Resident Surgeon at the Hospital, and Surgeon to the Depot Troop of the British South Africa Company's Police, vice Frank Arnold, resigned.

BURKE, P. J., M.D., M.Ch. Irel., has been appointed Junior Resident Assistant Medical Officer of the Workhouse, Chorlton Union.

CAMPBELL, COLIN, L.R.C.P. Irel., M.R.C.S., has been appointed Certifying Surgeon under the Factory Acts for the Saddleworth District of the West Riding of Yorkshire.

ELLIOTT, J. (L., L.S.A., has been appointed Medical Officer of Health for the Cudworth Urban Sanitary District.

ELLIS, H. A., M.B., Ch.B. Dubl., has been appointed Officer of Health to the Bonnieville Local Board of Health, West Australia.

EVERED, A. C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Quarantine Officer and Medical Officer to the Board of Health at Albany, West Australia.

FORREST, W., M.B., B.S. Durh., has been appointed Medical Officer for the Newbottle Sanitary District of the Houghton-le-Spring Union.

GARDE, T. W., L.R.C.P., L.R.C.S. Edin., has been appointed Visiting Surgeon to the Westbrook Reformatory, Brisbane.

GILLIES, J., M.B., M.S. Edin., has been appointed, *pro tem.* Medical Officer at Ingham, Queensland, and Visiting Surgeon to the Police Gaol there, and also Health Officer at Ingham.

GRAY, F. J., L.S.A., has been appointed Medical Officer for the Third Sanitary District of the North Witchford Union, vice A. J. G. Waters, deceased.

HANLEY, THOMAS FRANCIS, L.R.C.P., L.R.C.S., L.M. Ed., has been appointed Medical Officer for the Dorset County Police at Gillingham, vice T. Woods.

HARKEN, C. F., M.B., Ch.B. Dubl., has been appointed Officer of Health and Public Vaccinator for the Shire of Chiltern, Victoria, Australia.

HENRY, A. G., M.B., M.Ch. Syd., has been appointed Medical Officer to the Public Institutions at Parramatta, New South Wales.

HENRY, JOHN P., B.A., M.D., B.Ch., has been appointed an Honorary Ophthalmic Surgeon to the Italian Hospital, Queen-square, London, W.E.

HOYLE, FRED., M.B., Ch.B. Vict., has been appointed Senior Resident Assistant Medical Officer of the Workhouse, Chorlton Union.

JACK, ALEXANDER, M.B., Ch.M. Glasg., has been appointed *pro tem.* Official Visitor to the Reception House, Townsville, Queensland.

KANE, R. E., L.R.C.P., L.R.C.S. Edin., has been appointed Assistant Medical Superintendent to the Hospital for the Insane, Goodna, Queensland, vice R. A. Meek, resigned.

KNOX, R. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Eighth Sanitary District of the Bath Union, vice C. E. S. Fleming, resigned.

LUDLAM, ERNEST B., B.Sc., has been appointed Demonstrator of Chemistry at University College, Bristol, vice D. H. Jackson, resigned.

MCNISH, JAMES, M.B., Ch.M. Glasg., L.R.C.P., L.R.C.S. Edin., has been appointed Medical and Health Officer for Burketown, Queensland.

MILES, ALEXANDER, F.R.C.S. Ed., has been appointed Lecturer on Surgery at the Medical College for Women, Edinburgh.

NASH, J. B., M.D. Edin., M.R.C.S., has been appointed a Member of the Legislative Council of New South Wales.

PERRIRA, D. E., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed House Surgeon to the Italian Hospital, Queen-square, London.

PRICE, T. A., M.B., Ch.B. Edin., has been appointed Resident Surgeon to the Warwick Hospital, Queensland.

ROBSON, T. S., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the St. Osyth District of the Tendring Union by the Tendring Board of Guardians.

ROUTH, WM., M.R.C.S., has been appointed to take charge of the passengers of the steamship *Cintra*, quarantined at Magnetic Island, Queensland.

SHARMAN, EDWARD W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Health Officer for the Port of Auckland, vice T. H. Lewis.

SIMONS, C. N., L.R.C.S. Irel., has been appointed Public Vaccinator and Officer of Health for the Shire of Kerang, Victoria, Australia.

STAPLETON, JOS. J., M.D. Edin., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for Wallsend, New South Wales, vice J. B. Nash, resigned.

STORRS, E. G., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer for the Haxey Sanitary District of the Gainsborough Union, vice C. Barker, resigned.

THANE, E. H., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Government Medical Officer, Wagga Wagga, New South Wales; and also Visiting Surgeon to the Gaol, Wagga Wagga.

TURNER, A. J., M.D. Lond., M.R.C.S., has been appointed Health Officer to the Central Board of Health, Brisbane.

WEBB, A. B., M.B., Ch.B. Melb., has been appointed Officer of Health for the Shire of Colac, North Division, and Public Vaccinator for Beeac, Victoria, Australia.

WILKIE, D. W. B., M.B. Melb., M.R.C.S., has been appointed *pro tem.* Medical Officer at Herberton, Queensland, and Visiting Surgeon to the Police at Herberton.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASHANTI FIELD FORCE.—Experienced Dressers for six months in the Colony, with pay at the rate of £20 a month, and other money, &c., arrangements. Address to the Assistant Private Secretary, Colonial Office.

BIRMINGHAM WORKHOUSE.—Medical Officer for three weeks from the middle of August. Board, apartments, laundry, and attendance provided. Apply, stating terms, to the Clerk to the Guardians, Birmingham.

BOOTLE BOROUGH HOSPITAL.—Junior Resident Medical Officer. Salary £80 per annum, with board, laundry, &c.

BOROUGH ASYLUM, Portsmouth.—Junior Assistant Medical Officer. Salary £120 per annum, increasing to £150 by three equal annual increments, with board, lodging, and washing.

BRECON INFIRMARY, No. 6, Bulwark, Brecon, South Wales.—Resident House Surgeon, unmarried. Salary £100 per annum, with furnished apartments, board, attendance, fire, and gas.

BRISTOL EYE HOSPITAL.—Locum Tenens for the House Surgeon for two months. Salary 2½ guineas a week, without residence.

BRISTOL ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon.

CITY OF BOMBAY.—Executive Health Officer for five years, renewable conditionally. Monthly salary arranged.—Apply to the Municipal Commissioner for City of Bombay, care of Mr. John Lithiby, Local Government Board, Whitehall.

CITY OF SHEFFIELD.—Assistant Resident Medical Officer for the two City Hospitals. Salary £120 per annum, with board, lodging, and attendance. Apply to the Town Clerk, Town-hall, Sheffield.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer, unmarried. Salary £120, rising £10 annually to £150, with board, furnished apartments, &c.

COUNTY ASYLUM, Dorchester.—Second Assistant Medical Officer, unmarried. Salary £140, rising to £160 the second year.

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon for one year. Salary £70 per annum, with board, lodging, and washing. Also Assistant House Surgeon for seven months from Oct. 1st. Salary at the rate of £40 per annum, with board, lodging, and washing.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon for 12 months. Salary £100, with board, residence, and washing.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—Assistant House Surgeon. Salary £50 per annum, with furnished apartments, board, and washing.

DOVER HOSPITAL.—House Surgeon, unmarried. Salary £100 a year, with an increase after twelve months' service. Board, lodging, and washing provided.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY, Dumfries.—House Surgeon. Salary £50 per annum, with board and washing.

DURHAM COUNTY ASYLUM, Winterton, Ferryhill.—Junior Assistant Medical Officer. Salary £140, rising £10 annually to £160, with board, laundry, and attendance.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thorofare, Ipswich.—Second House Surgeon, unmarried. Salary £60, with board, lodging, and washing.

EASTERN DISPENSARY, Leman-street, Whitechapel.—Resident Medical Officer, unmarried. Salary £105 per annum, with furnished residence, coals, and attendance. Applications to the Secretary, 60, Great Prescot-street, London, E.

EYE, EAR, AND THROAT HOSPITAL FOR SHROPSHIRE AND WALES, Shrewsbury.—Surgeon. Honorarium of £150 per annum will be given for three years.

GROVE HALL ASYLUM, Bow, London.—Junior Assistant Medical Officer. Salary £120 per annum, with board, furnished apartments, and washing.

LONDONDERRY COUNTY BOROUGH.—Medical Officer to act as Medical Superintendent Officer of Health and Medical Attendant at Foyle Hill Infectious Diseases Hospital. Salary £350 per annum. Apply to the Executive Sanitary Officer's Office, Guildhall, Londonderry.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence at the Infirmary.

MANCHESTER EAR HOSPITAL.—Clinical Clerkship for a Senior Student for six months. Honorarium 10 guineas.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon. Salary £80, with residence, board, and washing.

NEWCASTLE-UPON-TYNE CITY ASYLUM, Gosforth, Newcastle-upon-Tyne.—Assistant Medical Officer, unmarried. Salary £130 a year, with furnished apartments, board, &c., rising £10 annually to £150.

NORTH CAMBS. HOSPITAL, Wisbech.—Resident House Surgeon. Salary £130 per annum, with furnished house.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch.—Resident Medical Officer for 12 months. Salary £120 per annum, with board, residence, and washing. Apply to the Secretary, City Office, 27, Clement's-lane, Lombard-street, E.C.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £150 per annum, with board, apartments, and washing.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £140 per annum, all found except board.

OLDHAM INFIRMARY.—Junior House Surgeon for one year. Salary £75, with board, residence, and washing. Also Locum Tenens. Terms 4 guineas per week, with board, washing, and residence.

PARISH OF ROUSAY AND EGILSHAY, Orkney.—Resident Medical Officer. Salary £51 sterling per annum. Apply to Inspector of Poor, Rousay, Orkney.

ROTHERHAM HOSPITAL.—Senior House Surgeon. Salary £105 per annum.

ROYAL HALIFAX INFIRMARY.—Senior House Surgeon, unmarried. Salary £120 per annum, with residence, board, and washing. Also Second House Surgeon, unmarried. Salary £100 per annum, with residence, board, and washing. Also Third House Surgeon, unmarried. Salary £80 per annum, with residence, board, and washing.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—House Physician, unmarried. Salary £65 per annum, rising to £75, with board, residence, &c.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AT VENTNOR.—Clinical Assistant. Salary £40, with board and residence. Apply to the Secretary, London Office, 34, Craven-street, Strand, W.C.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon, for one year. Salary £100, with board, lodging, and washing.

RUBERY-HILL ASYLUM, Barnt Green, Worcestershire.—Junior Assistant Medical Officer, unmarried. Apply to Medical Superintendent.

STAMFORD-HILL AND STOKE NEWINGTON DISPENSARY, 189, High-street, Stoke Newington.—Assistant Resident Medical Officer. Salary £100 per annum, with board.

SURREY DISPENSARY, Great Dover-street, Southwark, S.E.—Resident Medical Officer. Apply to the Secretary, 53, Borough High-street.

THE CHIEF INSPECTOR OF FACTORIES gives notice of vacancies as Certifying Surgeon under the Factory Acts at Bradford-on-Avon in the county of Wilts, and at Freshford in the county of Somerset.

TOTTENHAM HOSPITAL, N.—House Surgeon for six or 12 months. Honorarium at the rate of £20 per annum, with board, residence, and laundry.

UNIVERSITY OF GLASGOW.—Chair of Clinical Medicine.

VICTORIA HOSPITAL FOR CONSUMPTION, Craigleith, Edinburgh.—Resident Physician. Residence and board and nominal honorarium in lieu of conveyance. Also non-resident Clinical Assistant. Honorarium at the rate of £60 per annum. Both appointments for six months. Apply to the Hon. Secs., 1, North Charlotte-street, Edinburgh.

VICTORIA HOSPITAL, Folkestone.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

WEST BROMWICH DISTRICT HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon for one year. Salary £75, with board, residence, &c.

WILTS COUNTY ASYLUM, Devizes.—Assistant Medical Officer, unmarried. Salary £150, rising £10 a year to £180, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS.

COPEMAN.—On July 29th, 1900, at Wakehurst Place, Sussex, the wife of Sydney Monckton Copeman, M.D., F.R.C.P., of a son.

EWBANK.—On July 28th, at 13, Rockstone-place, Southampton, the wife of Arthur George Ewbank, of a son.

HOSFORD.—On July 24th, at St. John's-road, Upper Holloway N., the wife of B. Hosford, M.A., M.D., of a son.

SEARS.—On July 23th, at Lee-terrace, Blackheath, the wife of Alfred Ernest Sears, M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

HALL—GEDDES.—On July 25th, at St. John's Church, Ryde, Isle of Wight, Edmund Stokes Hall, M.B. Lond., M.R.C.S., L.R.C.P., second son of John Selby Hall, of Stoneleigh, Ryde, to Jessie Alexandra, only daughter of Robert Geddes, of Trotton, St. John's-park, Ryde, Isle of Wight.

MADDEN—COX.—On July 25th, at All Saints', Margaret-street, London, W., Frank Cole Madden, M.B., B.S. Melb., F.R.C.S., of Cairo, to Madeline Alice, second daughter of William Cox, M.R.C.S., Winchcombe, Gloucestershire.

PARSONS—PARKER.—On July 28th, at Holy Trinity Church, Llandudno, Frederick Gymer Parsons, F.R.C.S., son of Thos. Parsons, of Lee, Kent, to May, elder daughter of Henry R. Parker, LL.D., of Sywell House, Llandudno.

DEATH.

STEELE.—On July 25th, at Byford House, York-road, Southend-on-Sea, Ernest A. T. Steele, M.R.C.S., L.R.C.P., Surgeon to St. Mary's Hospital for Children, Plaistow, E., aged 34 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

ZYMOTIC DIARRHŒA.

MR. WILLIAM BERRY, medical officer of health of the borough of Wigan, has circulated the following letter among the medical men practising in the district of which he has sanitary charge, his object being to obtain an accurate account of the deaths from summer diarrhœa:—

"MY DEAR SIR,—As the period for summer diarrhœa is at hand I venture with some degree of diffidence to call your attention to the alteration in the mode of certification in this disease, as recommended by a Committee of the Royal College of Physicians.

"Diarrhœa is a symptom of some other disease; it occurs in intestinal cancer, tuberculosis of intestines or lungs, diseases of the liver and pancreas, &c., &c., and in such cases the primary cause should be stated in the death certificate so as to prevent the death being registered as one from diarrhœa.

"From a public health point of view the deaths that should be registered as caused by diarrhœa are those which are preventable and which arise suddenly, as a rule, at this time of the year and the two following months—namely, August and September. For these the Committee of the College of Physicians recommend one of the following terms as the best designation: (1) epidemic enteritis, (2) zymotic enteritis, or (3) epidemic diarrhœa, all other synonyms to be entirely discarded.

"The synonyms in previous use were: simple cholera, cholera nostras, cholera infantum, choleraic diarrhœa, dysenteric diarrhœa.

"As our infantile mortality is high I am anxious to have as correct a certification as we can possibly get. Therefore I shall feel obliged if you will, in accordance with the recommendation of the Committee, use the term of 'zymotic enteritis' in all cases where there is no other pathological indication as to the cause of death. In other cases where diarrhœa has been a secondary symptom the primary cause should be certified and the term 'diarrhœa' may be omitted as being only a symptom.

"With every apology, I remain, yours very faithfully,

"WM. BERRY, Medical Officer of Health.

"July 13th, 1900."

"GOLDEN SYRUP."

A CASE said to be of some interest to shopkeepers and certainly of much interest to their customers was brought before the magistrates at Hyde on July 19th. A grocer was charged with selling adulterated syrup. The inspector under the Food and Drugs Act asked for one and a half pounds of golden syrup, for which he paid threepence and sent a portion to the public analyst who reported that it contained 55 per cent. of glucose syrup which is made from starch, while golden syrup, which people seem to look on as a refined treacle, is made from sugar-cane. For the defendant it was stated that he had never before been asked for "golden syrup," that his customers asked for "syrup treacle," and that most likely the inspector could not purchase it in Hyde. On the other hand, the inspector said that he bought three samples in Hyde on the same day, two of which were pure. Although this adulteration cannot be considered to be one of those which endanger health it ought not to take place, but the magistrates—perhaps because they have given up the use of golden syrup—though they fined the grocer five shillings, did not apparently think it very serious as they "believed that a *technical* offence had been committed." If people wish to have glucose it should be sold as such and not as a product of the sugar-cane.

THE "HAGEY" SYSTEM.

To the Editors of THE LANCET.

SIRS,—It may be interesting to you to know that what is called the 'Hagey" system for the cure of intemperance is about to be established in London. The Hagey Institute has been in existence for some years past in Glasgow and quite recently a similar institute has been set up in Wales. From an interview which I had with the local manager it appears that the treatment consists in the administration of some tonic and the hypodermic injection of some drug at regular intervals during the day. It is said that if during treatment the patients take any alcohol they become sick. My attention was called to the matter because the managers before they commence treatment get some medical man to certify that the patients are free from both heart and kidney disease. In this district I called the attention of the medical man in question to the rather serious risk he was running in associating himself with an institute where unqualified men undertook medical treatment. It appears that a very large sum of money has been expended in purchasing the rights to use this treatment in this country. Needless to add that it originated in America. It would be worth while to call attention to the question in order that qualified medical men might be warned of the danger of accepting office.

I am, Sirs, yours faithfully,

Cardiff, July 20th, 1900. T. GARRETT HORDER.

A QUEEN'S CHOCOLATE BOX FOR SALE.

To the Editors of THE LANCET.

SIRS,—I trust that you will pardon me for troubling you with this. I am the widow of the late ——, who resided for many years in ——. I am in very bad health and very straitened circumstances, and my eldest son, a private in the Royal Army Medical Corps, who has been out in South Africa ever since the war began, has sent me the Queen's Chocolate Box to dispose of for my benefit; and knowing from experience how very good and kind you are in rendering assistance to anyone connected with the medical profession and who may require the same, I have ventured to take the liberty to write to ask if you can and will be so very good as to assist me to find a customer for the box through the medium of THE LANCET. My health is so bad that at times it renders me quite helpless, and if I can sell the box it might enable me to undergo a course of treatment from which I have been told by the medical man who has attended me for some time I may derive a lot of benefit. I shall be grateful for any assistance you can give me in disposing of the box.

I am, Sirs, yours very truly,

A MEDICAL MAN'S WIDOW.

*** If any of our readers care to make offers for the Queen's Chocolate Box we shall be pleased to forward their letters to the writer of the above.—ED. L.

WANTED—A HOME.

To the Editors of THE LANCET.

SIRS,—My medical man has advised me to ask you if you can recommend me a school or home for a son of mine whom he describes as feeble-minded. His age is 11 years. He has been attending an ordinary school for some time and I have also tried myself to teach him, but he can learn nothing. You might possibly get him to say his alphabet one day but the next day it is all forgotten. I do not think his case is altogether hopeless because he can remember plenty of things that occurred a year or two ago. I may mention that my means are limited. I cannot afford much for him.

I am, Sirs, yours faithfully,

July 21st, 1900. A PARENT.

CLUB PRACTICE.

To the Editors of THE LANCET.

SIRS,—I should be glad if your columns could be opened to a defence of the club system by those who advocate or practise it—often old-established men of good standing—as contrasted with the general contumely poured upon the head of a man who does a low-fee cash practice of say a shilling. Naturally it may be comforting for a collector to bring periodically a more or less fluctuating sum wherewith to meet current expenses when bills are paid with much delay but as compared with work done it is out of all proportion. First of all, assuming that the average club subscription is five shillings per annum, which, as a matter of fact, is far above the average, while in many places children are accepted at the starvation price of one halfpenny per week. This means that two visits per year exhausts, at the ordinary lowest scale of charging, that individual's premium for the whole of that said year, and in the case of a child, one visit in the same time on the above scale shows a balance on the wrong side. Moreover, children are always trespassing on the practitioner's time through their special ailments, not to mention maternal neglect. Of course, the theory is that the sound members pay for the sick ones, but in practice, as judged by work done, this is entirely erroneous. Even under the happiest conditions I have calculated that, taking 12 consecutive months, for every £1 taken at least £3 worth of work has been done in visits alone, as no record was kept of surgery consultations. As a matter of fact, on a certain Feb. 23th visits had been paid to the extent of the whole year's contract receipts, thus leaving every patient after that date to be seen and every bottle of medicine to be dispensed gratuitously. Further, apart from the above practical experience, on what grounds can the system possibly be defended, except as a charity, which I do not think certain undercutting medical men would advance, when statistics quoted in Whitelegge's Hygiene state that between the ages of 15 and 65 years the average sickness to be expected is 1·31 weeks per year, and this of course does not include children's ailments?

Then, again, a practice being as shown above trebled in work done must needs require more horseflesh and probably an assistant; consequently the net income is far below the actual turnover and the principal would be far better off with a much smaller purely private practice. Further, nightwork is materially increased, as a club patient scruples not to send at all hours for trivial reasons when a wholesome fear of an increased fee would deter any but a really important case sending; and when was a club patient grateful?

So the question may be summed up as follows. Increased work and impaired health thereby, net returns small, and, above all, the constant irritation of feeling that the profession is being sweated.

I am, Sirs, yours faithfully,

July 30th, 1900. M.R.C.S., L.R.C.P.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 2nd, 1900.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb	Dry Bulb.	Remarks at 8.30 A.M.
July 27	30·03	S.E.	...	119	79	64	64	68	Cloudy
,, 28	29·73	S.W.	0·53	111	79	62	67	69	Cloudy
,, 29	29·81	W.	...	124	79	61	61	63	Cloudy
,, 30	29·82	N.W.	0·03	128	78	57	61	64	Cloudy
,, 31	30·05	WNW	...	118	79	59	63	66	Hazy
Aug. 1	29·85	S.W.	...	102	68	63	63	65	Overcast
,, 2	29·74	N.W.	0·39	118	72	56	60	63	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (8th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat 2 P.M.), Cancer (2 P.M.)

THURSDAY (9th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.) University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.).

FRIDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.).

SATURDAY (11th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

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It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE, OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

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Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1900, which was completed with the issue of June 30th, and the Title-page to the Volume, were given in THE LANCET of July 7th.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1900 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

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